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INTRODUCTION.

THE following rules and observations being particularly addressed to Artificers or Workmen in the Callico Printing business, it is therefore deemed necessary to retain many technical words and phrases in use among them, however awkward they may appear, or however remote they may be from critical propriety, such as *boundage*,—*putting on*,—*cutting a curf line*, &c.

To many persons such an intimation is unnecessary, and probably it would not have been given (for nothing can prevent cavilling and ill-natured constructions) but that one or two to whom the manuscript was shewn, although they were Callico Printers,

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began to consider it more like critics; consequently their further perusal of it was dispensed with, and the Copy referred to a friend or two, of discernment enough to consider the critical quality, in this case, only as a secondary one; and that the end of the publication would be answered, if the contents were rendered intelligible to those for whose use they were intended.

It is likewise suggested, that as this is the first publication of the kind, and indeed the first ever offered concerning Callico Printing*, the Writer had nothing but his own ideas to adopt and arrange; it therefore followed that it was proportionably laborious;

* The Writer has heard of something of this nature in France, but he understands it to be more a description of the business than on the plan of this publication.— He however, will not insist that his is the only one; he may possibly be mistaken, although he has closely enquired concerning it.

and,

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and, however lightly some may think of the assertion, laborious it certainly was ; hence he, with some confidence, conceives that any person, unless pre-determined to view every thing unfavourably, will make the necessary allowance for whatever may not be so clearly expressed, or so methodically arranged as it might be, and with equal indulgence, excuse the insertion of what may appear of too little importance to have been remarked, or be perhaps repeatedly spoken of, as well as the omission of what might have been inserted, either through inadvertency, or as not having come within the scope of his observations.

Of

For reasons which will afterwards appear,
this Work is not paged;---and every Section
or Branch of the Business treated of, is
begun on this Side.

Of Pattern - Drawing.

AS designing or drawing Patterns is the obvious source of the business on which this tract is written, it may be expected that something will be said on it by way of instruction or advice; but, as Pattern-Drawing depends so much on what every one understands by genius, and is so much governed by fancy, little can be said on it to any advantage; however, as bearing some affinity with it, it will be considered in what the excellency of a Pattern-Drawer consists, and what some of the helps are, which genius may possibly receive from that experience which forms the basis of professional judgment.

By a good Pattern-Drawer should be understood one, who possesses a fertility of invention, with judgment to adapt that fertility to the best

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purpose, as it regards taste, effect, execution and expence; or at least, one who can improve on what is doing by others, or can readily catch the reigning style, and by adopting it, form his designs accordingly.

He should likewise have a knowledge of the business in every stage of its process, and consequently be enabled to answer, in some degree, how every intended effect may be obtained previous to the executive part being put into operation.

Hence the Writer ventures to say, that however excellently a Drawer can copy nature, or combine a number of colours, yet, if that be all, his utility is very limited, when compared with him, who without great neatness of drawing or brilliancy of colouring, can produce that variety which gives a spring to a business, ever dependant on the capriciousness of taste, and the fickleness of fancy.

It may nevertheless be observed (making a transition from Pattern-Drawing to the Patterns themselves) that it is difficult to say, what really constitutes a good pattern, as decisions on that subject are formed by different persons from very different motives; for instance, a Draper's determination

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mination of one is biassed by what will best suit his line of trade; a Printer's, that which is adapted to produce the desired effect at the least expence; while a buyer's opinion is guided by what is most generally exhibited in the shops; and many patterns acquire the character of being good ones, merely from a Draper having it in his power to command a general display of them, under every advantage; for the most fanciful and best executed pattern would have little chance of selling well, if seen but in a few places, or the sale not otherwise forwarded; as it then would not have the appearance of a generally approved one, and consequently it would be disregarded in a proportionate degree. But, as this will be occasionally considered in other places, a few sentiments respecting Genius, Fancy, and Invention, as more immediately the subject of this section, will be now offered; as well as what those helps are, of which genius may avail itself, toward directing its progress; with the needfulness and means of restraining its impetuosity, or preventing its eccentricity: some other thoughts will likewise be advanced, rather more remote to the immediate subject, but still having so much affinity with it, as to come under the

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cognizance of a Designer, or those who have, or desire to have, any concern in that department. But, it may be necessary to observe, that as the subject gives rise to several observations, not sufficiently close to be interwoven with it, therefore, for the sake of being as methodical as possible, and the keeping together what is more immediately to the point, they will be reserved for the Essay further on. —

Previous likewise to what will be said in this, and the following section, relative to putting-on the block, the writer intimates, that, to avoid confusion of terms, when speaking of Pattern-Drawers, he shall most frequently call them Designers; patterns he shall call designs; Putters-on the Block he shall call Drawers; and their performances putting-on; but, in displaying the rules, such distinction will not be affected, as he shall use them indifferently as best suits the immediate purpose. As for the terms Genius, Invention, and Fancy, though distinct ones, Fancy will be most likely adopted to serve for either, as being most applicable to designing for Callico-printing.

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IN the beginning of this section, it being said a deal depends on Genius in regard to the subject now in view, it may be expected, that, preparatory to what will be exhibited as mechanical helps to it, something will be said wherein it consists, how it is to be improved, what are its indications, and the like; it will therefore be attempted, not as aspiring to any thing doctrinal, specifically descriptive, or as seeking controversy, but only as it seems to hold a connection with the subject treated of; for, till terms are explained, understood, and universally received in one unequivocal sense, we animadvert in the dark, hence to ask what Genius is, how it originates, how it performs, or where is it seated? leads into such metaphysical obscurity or perplexity, that the most intelligent are at a loss how to satisfy such inquiries; for knowing little of the elementary principles of things, as the sources are so remote, how can positive or clear consequences be educed? therefore we sit down at last with simply calling it a faculty of the mind, and to express its operations, say something like what is ventured to be offered further on, taking certain positions as principles or maxims, and accordingly draw our deductions and argue from them.

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As for the display or productions of genius or fancy, enough is visible in every station, and therefore though only treating of pattern-drawing, an occupation of little worth or merit in the eyes of those who hold a high rank in the scale of artists, as if requiring little strength of intellect, compass of invention, or accuracy in execution ; yet, in its proper sphere, taken in all circumstances, it is with those whom it immediately concerns, of as much importance, and as difficult to attain, as many arts or sciences that are universally dignified.

Genius in any shape, it is observed, is not satisfied unless exploring unbeaten tracks, or rendering that perfect which cannot be rendered so by the efforts of mediocrity ; to constitute which and to empower it so to act, there must be fancy, judgment and taste : by fancy, various ideas seem to be carried to the mental repository and there stored up to be occasionally made use of ; but then fancy should be restrained or governed by judgment, or its emanations will be eccentric or extravagant ; and this faculty of judgment seems to be properly employed in going through its collection of ideas, to separate or arrange them as may be required ; or in other words, judgment is

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a kind of counterbalance to the eccentricity of fancy, curbing it (as before intimated) when impetuous, and guiding it when prone to deviate.

Further, As judgment is chiefly understood to keep the fancy within proper bounds, so that nothing be unnatural or distortive; another power is requisite to render whatever is produced, not merely free from fault, but to give it a beauty, and an elegant and highly polished finish; which power is generally expressed by the term taste; of which much has been written to define, and to bring under certain rules, but with little effect, being a faculty more acquired by accident than by nature, and partly depending upon circumstances not always regulated by strict propriety; but as it takes in the consideration or knowledge of what is generally, and (in some cases) universally, allowed to give a finish to the works of art; it is therefore able to form a decision, either as applicable to the performance under the designers hands, or in determining on the works of others: Taste, however, according as it is employed, is either superior, or subordinate to judgment; as the arbitrator of ornament, it is despotic; but in following nature, it must be subjective; hence, according as the fancy or judgment is likely to be

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be employed, let the designer attend to this distinction, as, in the instance of pattern-drawing, taste is to be understood as the uppermost quality to be acquired, nature being no way in that business likely to be very closely imitated ; but in other situations where the performance consists in its resemblance of nature, and that resemblance is required, there, judgment (with taste however at its call) must claim the precedence or first notice.

Again, Either of these three qualities is of little service without the assistance of the others, fancy alone being very inadequate to produce what is requisite (even when required to be wild or grotesque) for though its productions may please, it can be but for a moment ; but, when regulated by judgment and adorned by taste, it strikes almost universally ; the decorative part pleasing those who know but little, or overlook that of the natural ; and those who look for propriety, find it, with the addition of that heightening or vivification which true taste imparts ; for when these are united, they of course strengthen and add to each others power and effect, exhibiting something novel, expressed with propriety, and embellished with elegance ; genius, which is the vivifying

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vivifying spark, giving a spring and spirit to the whole; and without which, the most elaborate works of judgment will never give much pleasure to any one of a refined and comprehensive turn, though for a while they may please a frigid observer.

It is not the business of this little effusion to particularize the indications of genius further than as immediately applicable to the mechanical operations displayed further on; the writer however will just mention that many have been deceived by an early indication of such a gift, forming great expectations that when ripened, it would acquire much celebrity; but, it is not easy in juvenile objects to say into what road it may hereafter strike, for until their productions may be supposed to be regulated by that degree of discernment, which requires some maturity of years, there can be little of what is termed judgment: hence many youths have been put to designing, though it has afterwards appeared their talents have been much over-rated; and in deciding on such indications, a caution should be observed, for though genius may seem to improve as maturity approaches; yet ere that epocha commences, it may have passed its meridian; which is seen frequently.

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frequently to be the case, whenever a remarkable early display of genius has been visible : besides, people who thus hastily decide, are not aware, that while they do not expect a perfect performance, and look but for an attempt, they only commend its proximity to perfection ; but when the time comes that something masterly should be produced, the performer may shew that his genius was not of the kind to arrive at that height ; and then, those who predicted great effects, are proportionably disappointed and mortified.

It is impossible to specify all the impediments to a lad's improvement, or the helps he may receive, a deal depends on either ; for instance, a youth with strong indications of genius may be placed where there is no one proper to cultivate it, the situation* or course of work may not be congenial

* This may be alluded to as particularly applicable to lads being put out to Pattern-drawers who work at home (and it holds good respecting Cutters and Engravers) though this is an error in those who put them out ; for when out of their times they have in effect another term to serve before they know any thing beyond the use of the pencil, the knife, or graver, otherwise than by mere precept ; and, of course, can be but of proportionate service at a manufactory.

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congenial to his natural aptitude, or he may be precluded those circumstances which are necessary to give him confidence, and improve his understanding in general matters ; these are points (lamentably for the youth) too often totally disregarded,---and from these and other reasons, it may be advanced, that there are so very few good pattern drawers, (according to the definition just given) though such numbers have served as apprentices, or been pupils to pattern drawing, and this leads to say, thinking how forward many are, to take pupils or apprentices to drawing (leaving the *weighty* consideration of premiums out of the question) that those who have youths to put out, and those who are inclined to take them, should not be very prompt either way, from the considerations mentioned above, as well as what follows ; for it is of little signification to say, that such a lad shews a great genius or taste for drawing, or any business depending on fancy, unless there is some indication of an understanding equally acute and comprehensive in general matters, with other concomitants of vivacity, good disposition, and a plastic temper; as then, and then only, there seems hopes of his genius, whatever bent it may take, furnishing itself in its approaches to maturity, as circumstances offer, with every requisite towards improving ;

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improving it, and that without the formal imposition of precept, rule, and frigid advice ; consequently when arrived at that age, in which something beyond a mere effort is expected, his own hopes and views, as well as those of others, will not be disappointed.

It is begged that what is above advanced be not understood as giving into the common mode of inveighing against taking apprentices, from the probability of lessening the value or scarcity of designers, who have passed their novitiate (as may likewise be said of other branches) what has been said, is more directed to parents, who are prejudiced in favor of their children's talents, or through fondness mistake their inclination for genius, for unless a lad is likely to shew those faculties which will get him through life with credit and ease as an artist (in which class designers may be included) he had better be put to any common mechanical employment, as certainly nothing can be a greater misery to a man, than to think his living depends upon the productions of fancy, and he is unfortunate enough not to possess a single ray of it, and that, consequently, his utmost exertions are despicable, and of course not worth exhibiting.

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The writer will now endeavour, perhaps not over methodically, to throw in such documents as seem to him most likely to assist the fancy in its exertions, and with such remarks as occasionally arise, either as more or less applicable to the designer or his employer; and before he speaks of the mechanical parts of designing, he will dwell a little on some circumstances not totally irrelevant to such employment, and probably not absolutely unworthy the notice of either party; for, though the aim may be missed, the intention is to render the performance more easy to one party, and consequently more advantageous to the other.

In the first place, it is suggested, a Designer ought not, by any means, to be considered in so mechanical a light, as if fancy or invention were of such a nature, that he can at all times command a successful operation *; similar to a person

3 Those are particularly alluded to here, who are engaged as Designers to work a stated number of hours in a day. But to treat Designers with proper address is what few Principals are competent to.—See something to this effect in the Note at the end of Pinning.

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person performing a merely mechanical piece of work, in which little more than utensils are needful, and the subject to be acted on is immediately and conveniently at hand. To illustrate which, it may be observed, that Principals themselves, at times, affect to say, Designers should only work when so disposed, yet many of them, inconsistently with such a position, think nothing done unless they see something on paper ; making hardly any account of what the invention is at work upon ; but, contrary to this practice, it is here said, that the designer should not be asked, except on singular occasions, how he means to do such a part ? what will be put in this or that place ? what will be the colour of this object ? and so on ; but that a proper mode is, (when not left entirely to work from his own fancy) for him to be told what sort of patterns is wanted ; on which, he accordingly draws a number slightly, or perhaps nearly perfect, agreeable to the nature of them ; from these a selection is made as having the best effect ; afterwards another is made, including that quality, with their adaptation for working ; and even from these it may be needful to make a selection as proper to shew, or to be put into execution.

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All this is however offered as matter of opinion, or only to be put in practice where and when it can be done conveniently, as at all times and in all places it cannot, neither is it always necessary; but this is however insisted on, that a Designer can do little with pleasure to himself at a Printing-ground, if under restraint, or subject to that kind of controul, or enquiry, which has been expressed above; or if his employer be of that cast, who consider all under them as but mere machines to procure themselves profit, and that as such, they have nothing to do but to spur every one on by any method, however coarse and unfeeling.

Respecting this operation, and indeed any other, it may likewise be noted, that one person only is proper to give orders (no matter how many have been previously advised with) for rarely do two or more agree in opinion; and for a designer or any other to receive orders from several, and those orders different, or countermanding, no one need be informed, is productive of much embarrassment, and often subversive of what each party desires.

But turning now to the immediate subject of this section, and in particular alluding to fancy, it

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it is suggested that every one is prejudiced in favor of his own ideas, or what he concludes or wishes to be understood as such, Principals are particularly prone to be much in love with such apparently new ideas, and not being always under the necessity of consulting any one, they often adopt and put in execution, too precipitately, what has struck them as valuable ; not discovering how they have deceived themselves, till they find no other person seems struck by its appearance when displayed, as they were by it in idea ; for if they first speak of such an idea to their subordinates as very striking, they not being always at liberty to pass sentence, or even give their opinions with that freedom which the principal can and will on what they might offer, the infatuation does not go off so soon, nor is it seen as such till too late.

Drapers likewise frequently getting hold of an idea, adopt it as a good one, and endeavour to communicate it (perhaps with a friendly intention) but are often greatly disappointed when what is drawn in consequence of such communication

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cation does not give the effect they want*. A great deal of time, trouble, and other inconvenience would however certainly be prevented, by letting those *wonderfully striking* ideas rest a little till thought of more coolly; and then, if no diminution happens in their apparent value,

or

* The above suggestions lead the Writer to observe that some will say if they could but use the pencil, they are sure they could produce something wonderful new, and striking in effect!—to combat unthoughtful prepossessions of such a kind the writer knows would be to little purpose; he will only say of this, that he who advances such a notion, can know nothing of the operation of the inventive faculty in such a case, and of course does not distinguish between a certain end or point represented to him by the liveliness of imagination, divested of all obstructions to its appearing so forcible in novelty and effect, and the operation necessary to produce or display it on paper by a mechanical or manual process, with the usual interruptions of objections, impediments, revisions, dissatisfactions, &c.

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or ideal effect, there is the greater probability of their succeeding and striking more universally.*

It often happens too, that many (Drapers particularly) are violent in requiring something new,

* Speaking of this infatuation in favour of self-created ideas, the following little anecdote is offered, and which shews at the same time how with a little finesse, a weak side may be played with: A person having to shew a number of patterns, as townsmen (when it was the custom to take a quantity of patterns only at stated times, and after shewing them, to make them general) having displayed them before a Draper, he, after praising some, and rejecting others, said of one, that if altered in such a manner it would be much better; the person who shewed the patterns, willing to temporize, told him his observation was judicious, and added, to heighten the flattery, that several others had made exactly the same observation; this so pleased the Draper, that he set about altering every one of the patterns in the same *judicious* stile, and took such pleasure in his employment, and retained the other so long, that he had little time to go elsewhere that day, resolving to take care for the future, how he commended the alterations suggested by the same person again.

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new, or totally different from what has ever been seen; all this has a busy sound, and in idea promises great deal, or at least implies the hope of a great deal; but could it be procured, the expectation might not be answered, as it generally seems that when any thing happens to be produced, very different from the common run or appearance of work, or what may be called the reigning style; it has not the chance of getting into vogue, for reasons already given, except when a Draper of eminence, who holds his connections as it were by a bridle, is determined to push what is a favourite of his; though even that will not always succeed; for somehow or other capital blunders are now and then made by the most experienced, in the chusing of patterns. Cautious Drapers however are not very forward in this respect; they know, indeed all must, that though at all times there are certain classes of patterns that ensure sale, yet a continuation of one stile, will tire in time; and the utmost efforts to continue it, will not always be propitious; * for innovations

* This may be illustrated by a capital connection in town, fruitlessly attempting

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tions in style, rarely happen abruptly ; they are brought about by slow degrees, or in fact more by accident than design, and oftentimes in a manner contrary to what any one might conceive. Much, to be sure, is sometimes said of the fickleness and whimsicalness of Drapers and others, but there surely is little cause, it being natural to be tired of any thing ever so excellent when very familiar, and of course novel or different appearances are sought after ; but when interested views are annexed, and those variations cannot be sufficiently obtained, it is just as natural to repine.

There was a time when no one thought grounding off the table could be performed as it now is ; the writer well remembers when it was in agitation, to print two reds and two olives at the house where first executed*. All the Printers exclaimed that the two after-colours could never be put in according to the designs ;

attempting for two or three seasons to force stripes into vogue ; but though the work was generally good, the effort subsided under the prevalency of a different style.

* This was at West-Ham, Essex.

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it was however attempted, and it succeeded, and nothing but that course of work was done there that season. The next season, indeed shortly after, it was attempted at other places; and now little difficulty (comparatively speaking) is experienced in it.

It may likewise be said of black, dove, and yellow patterns; at first the grand objection to executing them was that a black could not be procured; hence when dove was introduced, it was done off the table, by those, who wedded to the old system, execrated an innovation, which then, for the honour of a good black, appeared discreditable; but others, who were less tenacious of such honour, as well as for other sufficient reasons, soon brought that course of work into vogue; and now, or at least very lately, what course was more general? it may be said too, in speaking of black, that formerly it was a maxim no pattern with a mixture of colours would do without it; but it is not thought so now.

What the writer has now to advance, as rules or documents respecting designing, would follow here properly enough, but having little to advance, and that little not satisfactory even

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to himself, he will defer it to the end of the section ; observing however, as leading to what he means to say about Genius, Fancy, Invention, and drawing, that more might very probably be said or advanced as Rules, but Genius or Fancy cannot be dictated to ; Fancy must, in many cases, be left almost intirely to itself, as not coming under a mechanical description, or analysis : much to be sure may be said, and pretty disquisitions have been given, (perhaps these in this article are of the number) about judgment presiding with coolness, while fancy is wandering here and there ; then taste is ushered in to the assistance of judgment, and so on ; but he is induced to think, that in genius is comprised that faculty which soon avails itself, whenever opportunities happen, of what is necessary to render its emanations effective ; in fact, Rules imposed on a natural genius, too often shackle it, and it is almost proverbial, that true genius soars above all precept, and looks with a becoming disdain at the formality of rule ; often producing what never would have appeared, if rules authoritatively given, had been closely adhered to ; and it may be said, when Fancy suffers itself to be pinned down to Rule, it is to be suspected there is not a great deal of genius, and that those who can produce little without certain rules to lead

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lead them, are not much better than copyists or imitators ; but turning to the point in view, which is the province of fancy, namely, designing, it is only at certain times that it is alive,* and then it despises fetters ; when it is not free, like every thing else in distress, it catches at any assistance, and is thankful for any help that offers itself.

Fancy notwithstanding, should be (as before said) at all events, free from certain impediments or restraints ; which applying to a Designer's performance at a Printing-ground, can hardly be done ; from the mind being confused with various considerations, that obstruct or divert its efforts, such as receiving orders from several, murmurings at not always succeeding, being forced to do duty at all times, and the like ;† but

* What is a man's genius or fancy worth, when distressed, brow-beaten, or otherwise illiberally treated ? and how little do many think of what are often the real causes of the great difference which at times appear in the works of men of genius ?

† These may seem to many but trivial observations, the writer however, from experience, knows the contrary ; and he is certain some others in the most eligible situation as engaged Designers, know the same ; indeed an engaged Designer at a Printing-Ground is now little more than a Compiler.

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but chiefly too much (it is again hinted) from many Principals incessantly desiring to be occularly convinced he has not been idle; for it is here asserted, that the first Designer in the Printing business (however the assertion may wound his pride) would be ashamed to have it seen how dissatisfied he is sometimes with what he most endeavours to render perfect, the repetitions which he makes, the doubts he is in about rejecting this or that idea, the difficulty of fixing his attention, &c. and it is thence as confidently said, that those patterns which for several seasons have been allowed the first place, would probably never have been produced, if the Designer had been shackled by the direction of others, or been in that controuled or subordinate state, where his own inclination must have given way to the frigid direction of those, who, more alive to gain than reputation, find no impulse to ascend beyond a certain height, or stretch out beyond a certain distance from the beaten path.

As for invention, strictly speaking, it is not here offered to say what it is, much less how to describe it; there is a mutation of stile or taste, to be sure, but nothing new; for novelty is only a name for an old effect or appearance revived with a little alteration

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alteration, and (making a metaphysical excursion) if the question were asked, what is original? an anfwer could not be easily obtained sufficient to satisfy some enquirers; the term having no precise meaning, till it is agreed on all sides, how ideas are acquired, whether intuitively or by fensation, or, in other words, whether productions termed original, are or are not but mere copies of certain archetypes, conveyed to the mind by its attendant faculties: and if the proudest designer in the printing or any other busines, would be candid, he would confess there is not near so much of inyention in what he produces, as he desires the world to give him credit for; since if traced to the source it will generally appear that the mind received a hint, if not something more expressive, from some visible object or other; and it may further be said, that the greatest genius would be ashamed to be discovered at the little shifts he often makes to attain a certain end, by searching into nooks and corners, as it were, for objects to strike out something from, or at the quantity or collection of subjects he secretly heaps up to supplyhimself with thoughts and hints, and the methods he takes to disfigure the ideas he thus more or less surreptitiously purloins, to make them appear novel; and too glaring

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glaring it is, how a reputed genius will contend about his claim to what is palpably plagiarism ; and which among Designers in the Calico-printing business, is certainly as frequent as among other classes : Besides, if it be considered what a number of Designers are always at work, and how many thousand patterns are produced in a year, but how few of them remarkable for novelty, it must seem still more clearly there is very little of striking out of the beaten path, and much less of originality than might be expected.

In some cases it is more difficult to imitate than invent ; for the quality generally demanded in an imitation, is to excel the original ; but unhappily that word excel, in this case, is very vague ; it may very likely be altered for the better, if alluding to its being rendered easier to work ; but almost every different person will have a different idea about its appearing better, or having a better effect, at least as far as they chuse to speak, or are at liberty so to do.

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As applicable to the preceding sentiments, it is observed that some will say, when a Designer means to produce something remarkably excellent, he first fixes on a plan in his own mind, and nearly forms it there before he transfers it to paper; all this the man of fancy smiles at, knowing its fallacy; for whatever may be said of the mind forming a plan of something, the judgment regulating it, and thus mentally working on it till compleat, it is strange that any person is infatuated enough to believe such a thing, or ridiculous enough to assert it can be done; the works of the greatest genius's that have been produced, no matter of what species, have been perfected but gradually, and as it were by piece-meal, but to advance the position just mentioned, is just as if a person said, I have an original in my mind, and I will set down and copy it on paper;—he may to be sure set about it, but the original in his mind will be very far from being faithfully copied; for he may begin as the ideas present themselves, but by being obliged to disjoint that mental original, he very soon in his progress loses the first appearance, and before the completion of his copy, through repeated alterations, rejections, &c. it may very probably be quite of a different shape and complexion; and that this is the case in

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Pattern-drawing, the writer ventures to say few of his brethren will deny. §

The writer begs not to be understood by any thing which he has suggested, as meaning to deprecate merit or genius, (he himself as a Designer is more put to his shifts than he at all times chuses to own) his aim partly by speaking thus freely, is to induce those who are reputed possessors of it, to be cautious how far they give themselves praise or credit for what they do possess, as rarely half what a person advances of himself, is believed ; and in this case, Designers as well as others, whose existence depends on public caprice, would be less arrogant or puffed up in the zenith of their reputation, if they frequently reflected on the versitality of taste or fashion,

§ It is a common mole of speaking when applied to any art or science, to say, what a genius he must have had, who invented it ; or what an excellent invention it was : such an exclamation is truly ridiculous, and void of thought : as in the instance of Callico-printing, it is very likely the first efforts concerning it, were hardly worth notice, but successive improvements have formed it into some system.

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fashion, not knowing how soon such caprice or mutability may affect them ; as it is not every one that can readily come into every turn of that fickle despot : that this has been the case, is well known in instances of several who have been deemed capital Drawers, but are now almost totally disregarded ; hence, if the writer may venture to advise in this point, let every Designer who wishes to secure his credit as long as possible, not foolishly affect to stand alone or obstinately to oppose or contemn that stile which is prevalent * ; but gradually slide into the changes as they happen, or blend them with his own peculiar manner ; otherwise, certain is must be, that from the fickleness of opinion or fancy, and the consequential change of fashion, together with the probability of a rising generation of Designers eclipsing him, he, at a certain period, will regret that self-sufficiency which blinded him to natural defects, or that restlessness which stifled what prudence ought to have suggested.

* This should be understood as likewise addressed to Prineipals, who affect to oppose a prevalency of style.

Of Pattern Drawing.

It is time now to turn from these excursions, and proceed to give some hints (Rules they cannot be called, nor are they inserted as such) respecting the operative parts of designing, more to evince a readiness to do those some service who perhaps expect it, and are not to be persuaded but that it may be obtained in such a manner, than from any confidence in their value, or satisfaction in their display ; as, in respect to utility or practice, they can only be general documents, from the changeableness of style or taste ; besides, every person who is in a situation to decide, and can have his decision put in practice, has his fixed ideas of taste, propriety, good drawing, &c. some through prejudice, some through affectation, and others through opposition. As for example, some explode a certain shape of a leaf, a leaf, a flower, or other object,* either as being too plain, stiff, common, and the like ; or else as expensive in cutting, difficult to pencil, and so on ; while others have their reasons

* It has the appearance as if a certain house saw no beauty in any leaf but of this kind, fig. 119, as almost all other kinds of leaves seem to be avoided, and respecting which, see Rules 17 and 35, for putting on.

Of Pattern-Drawing.

reasons for adopting the very contrary ; the same may be said of trails, some rejecting a curled one, others an upright one ; in short, it would be endless to particularize those different opinions, or what by different persons are adhered to as standards of elegance, propriety or grace ; all see through different mediums, and of course are differently affected. *

N. B. Respecting the following hints, it may be noticed, that several of the Rules for putting-on should be kept in sight by the Designer,---especially about the width of the cloth,---an even face,---easiness of pencilling,---economy in cutting, &c. Rule 6 for putting-on is almost a counterpart of the following.

HINTS,

* Perhaps the idea may seem strained and wide from Pattern-drawing, but such is the connection between things apparently remote, that a good piece of History Painting, as comprehending design, colouring, effect, &c. may be considered as a model to form a chintz pattern from, by supposing each figure a flower, and the back ground, the attributes, and other appendages, as leaves, or ornamental parts.

Of Pattern-Drawing.

HINTS, &c. for Designing or Pattern-drawing. 15

In drawing trail patterns, if you mean to have flowers or other objects stand so as to appear distinct from the other parts, first mark their distances, observing to make the trail spread regularly ; then mark what objects are to be of different colours, keeping two or more objects that are similar in shape and colour, as far from each other as you can, and let every colour speak as it were, but particularly those that are the leading or characterizing ones ; or, in other words, let nothing be lost or kept back, but what is of the least consequence.

In

• A mistake is here just mentioned, prevalent chiefly among subordinates, which is, that a master's business depends on having a good Drawer ; this in some cases is far from truth ; for the goodness of his Drawer is of little service, if his connections are not respectable ; good drawings will undoubtedly help to procure work, but they will not force it, if there be no good understanding in another shape : and which every Printer who works for Drapers well knows.

Of Pattern-Drawing.

In groups the greater the contrast, the better the effect, as a light object among dark ones generally succeeds; reds and greens being the most harmonizing colours, or the most agreeable when put together, should therefore be properly attended, so that they may command an appearance: where there are two or three reds it is certainly best to let the body colours, that is, the palest colours, stand clear, or without being covered too much by the deep ones;* but on the contrary, when elaborateness and delicacy is affected, these observations cannot avail.

In dark or shady patterns (according to the present humour) there seems to be a requisition for a plain white object to stand forward; and if kept in an harmonious proportion to the whole, it

* This is instanced in a late imitation of a dark ground pattern, with a kind of moss or spray hanging down in great quantities, as from the judicious circumstance of throwing in more body colour in the commanding flowers, than the original had, the copy had on the whole a better effect.

Of Pattern-Drawing.

it certainly has an enlivening effect; but to judge of it according to the principle of harmonious colouring, or distribution of shade, the effect is too abrupt to produce harmony, though as above said, it may be lively.

Small copper-plate dark grounds seem particularly to require a white object, or a distinct white part of one, and it would not be amiss in copper-plate small patterns, to manage them so, that when the light parts are gone, something expressive may be left behind.

This enlivening effect is generally destroyed in dark patterns, where the colour ends in shades within an object, or without being bounded by a line of some sort, as it gives the white about it a tinge, and in woalded work, the less the yellow touches or goes over the black it is the better, as it generally hurts and renders it of an olive hue; this however depends upon the colour, but but particularly so when executed without grassing or fielding, as in the case of patterns brought up in sumach and bran bleached, the cloth not being then of a good white.

In

Of Pattern-drawing.

In drawing some classes of patterns, it is as well to make them as general as possible, though that, it is granted, is rather an after-consideration; and in patterns that are to have chemical or loose colours thrown in, † which soon fly off, there should be fast colours, (unless the whole is in chemic) under them, or so connected, that there may seem as little deficiency as possible, when such loose colours disappear.

† Of all technical phrases among Callico Printers, it is worth remarking, that those processes which are the most simple, should be denominated chemical, to distinguish them from those that have a stronger claim, in every respect, to that appellation. Perhaps the writer is wrong from not knowing how it originated; but every profession has its vitiated or perverted terms; and if rendered proper, they would not long remain so.

Of putting on the Block.

The writer therefore presuming the truth must be pretty evident of the observation just advanced, that putting on the block is an operation of more importance than generally deemed ; he consequently thinks he cannot be too strenuous in exploding the contrary idea ; for even those who have adopted it, must allow, that being the first operative or mechanical movement, according as that is adjusted or managed, the after-processes must be more or less perfect or accurate.

Indeed when a person who, from his situation, cannot be supposed to know much of the matter, deems it a trifling performance, and easily attained, such an idea is not to be wondered at ; but when one who has been his whole life in the business, particularly if in the situation of a Principal, and has often verified and felt the consequence of errors or failures in that department, treats it in such a manner, or thinks that the mere command of the pencil, constitutes good putting-on, it is much to be wondered at ; therefore the writer is also induced to enlarge on his assertion, that good putting on the block principally consists in the contrivance and adjustment of one requisite with another, for the well finishing of the whole process ; to perform which, implies the possession of judgment, and

Of putting on the Block.

experience in the operator, and who must necessarily be supposed to have reduced his observations to that point, which tends to some method in the performance of it.

But, let every one well note, that the possession of natural and acquired abilities, combined with any set of operations, reduced into a system, can be of little help to the operator, or of advantage to his employer, unless properly accommodated in respect to time, utensils, situation, and other conveniences ;* in short, no rules can be

of

* The writer is the more particular on this head, having been in situations with and without such accommodations, and the difference to him has been such as even to induce him to give up engagements otherwise desirable enough ; however, want of time and conveniences would not be so grating, but that, unfortunately and absurdly, work is often expected to be as complete as if performed under every advantage ; or at least if it is not, a dissatisfaction is rarely withheld ; as for time necessary to be allowed, that can only be comparative, but at any rate, according to the motto on the title page, there is a wide difference between expedition and hurry. Sometimes it is necessary, in all stations, to be particularly expeditious, and then of course, every nerve should be strained ; but it is impossible

for

Of putting on the Block.

of service, any more than the greatest abilities, if the means are with-held that should give energy to them.

It may however be said, that this department has suffered in the common estimation of its value, from being a branch that does not appear the most conspicuously when the work is finished ; as then the colours only taking the eye, and nearly excluding every other consideration, the putting on is hid, as it were, or forgotten, whatever the trouble might have been, as tending to produce that appearance which pleases, though not thought of, as owing to that operation, but in the instances of bad joinings, and other glaring faults it must strike every indifferent person as a defect in the management of it. In truth, according

to

for the tension to be perpetually kept up. As for saying as some will, that when a Drawer has to put on a pattern, he should take half an hour, or an hour to consider about it, it is but partially applicable, some patterns requiring little, if any, consideration, while in others, the whole process is hardly anything else. This œconomy in point of time, and restraint in point of convenience, has been in a great measure the cause of such general incorrectness in country work....Of which see more further on.

Of putting on the Block.

to common speaking, or in a loose description of the busines, putting-on the block is spoken of in this manner (which by the bye is nearly all the information the writer could procure from all the publications he has examined) "A design is made on paper, which is transferred to a block of some close grained wood, and given to a workman, who with small knives, chissels, and other instruments, leaves in relief, what was drawn on the block;" and this leads him to say, that perhaps he may be excused for the vanity of thinking, he is the first who has formed the subject of this publication into some order or arrangement, and shewn the connections and dependances subsisting between the different departments; and he ventures to suggest it has been owing to the want of some such arrangement, that many have ~~looked~~ at the department of putting on the block in so indifferent a light, and not having had leisure or inclination to form any set of rules, or to make minutes of observations, their memories have not been faithful when particularly needed. But, (as already intimated in the introduction) he has ventured on untrodden ground, he may of course be expected to make frequent deviations, and can therefore look on the work as little more than a sketch of a system, which probably may hereafter be moulded into a more methodical or intelligent form.

Of putting on the Block.

Respecting putting on, it is further observed, that Cutters, Printers, Pencillers, and Masters, have different ideas concerning it; a Cutter is for clean drawing, without caring too often how it is to work, or even whether it can work at all. A Printer thinks little about fine drawing, so that when cut it is but a handy print, and (as the phrase is) that it will make a good mark. A Penciller, every one knows wants a good line; the Principal (as may be supposed) cares not how many essential requisites are combined; but chiefly, that the work be found enough to do a great many pieces; or if an engaged pattern, that it be able to do all the order well, with wanting little repair; each of these parties assume a certain portion of judgment, though (naturally enough) paying particular regard to their particular departments; but, after all this, perhaps the writer starts a novel suggestion, which is, that the Draper is the only judge;* for unless (as often touched on in this work) the desired effect is not produced, or that effect which forwards the sale, fine drawing, fine cutting, fine printing, &c. has been bestowed on the pattern to very little purpose.

* That is, in respect to engaged patterns, but with those who print for themselves, the case is something different.

Of putting on the Block.

After these general hints, (adverting to what is advanced in the beginning of this section that is, the error of deeming inferior drawers competent to the business of putting on the block) it is to be observed, that a good designer may not be a good putter-on ; as putting-on requires judgment only ; and this necessarily impels the writer to speak of the time needful to be allowed for the contriving part of putting-on, similar, in that light, to what he has said in speaking of pattern-drawing ; as many thinking little done, unless they see something drawn with colour on the block, make little allowance for mental operations ; but, in this case it is asserted (and will very likely be repeated) it can only be in the general run of what a person can perform that a proper deducement can be made respecting his expedition ; for a person whose business is to study or contrive, is always at work, as he must be continually thinking in what manner he is to proceed ; since, besides being under the necessity of proceeding cautiously himself, he has to provide for the incautiousness of others ; and that at all times, (if he has the interest of his employer in view, or has any solicitude about his own reputation) is sufficient employment for his hopes of success, or his fears of mischance.

Recurring

Of putting on the Block.

Recurring further to the intimation that the time necessary for the contriving part of putting on the block is more than some principals think needful, the writer observes, that many often conclude no work, or but very little, is done, unless they see a gradual progress of operation, probably originating from the very circumstance of making little allowance for the time necessary for contrivance, or else from over-looking every other circumstance but that of gain, which to be sure is excuseable, because natural ; as for mere drawing, it is frequently what takes the least time, except in variegated patterns, and where the work is very fine and intricate ; besides, in some instances, drawing on the block is time and trouble thrown away, particularly where gouges and other tools are used that take out certain shapes, as round holes, barlycorns, diamonds, ovals, and the like ; the eye in such cases never being able, in drawing, to carry the exact shape of every object ; and to have a shape cut and print it, is not always easily or accurately done.

As Cutters very often affect to determine on the merits of putting-on, it is intimated respecting them, if the drawing be ever so excellent, it is generally half destroyed by damping

or

Of putting on the Block.

or scraping, though the stroke of the pencil may however still be clear; but if a Cutter has not some idea of air or gracefulness, or what the intention of the design is, he will, very likely, produce a stiff or awkward piece of work from the most exquisite drawing on; but, on the contrary, if a Cutter be a master of his business, he does not always deem this or that little nicety very essential, and in many cases needs little more than a sketch for his guide; further, it sometimes happens by incautiousness or accident, that many parts of the putting-on are obliterated; hence if a Cutter absolutely need such formality of direction, he will often be at a stand, and his deficiency will be greatly to his disadvantage and discredit.

The writer now more immediately addresses himself to the Drawer, respecting the operation,* though in a general manner, (the particulars being contained in the following rules) supposing, for form sake, as those matters have been spoken of, that he is accommodated in every shape,

* A word or two respecting mistakes, or imperfections, either as tending to prevent them, or how to treat them when they happen, would not be improperly inserted in this section; but being of general application, they are referred for another part.

Of putting on the Block.

shape, and that he has a capability naturally of profiting by instruction, or his own experience; otherwise, every body knows, all that can be said or exhibited, must be to no purpose in any particular; this allowed, it is observed, that there are two species of faults or errors, which should always be distinguished by the operator, and though no fault is too small to be disregarded, yet some are more to be guarded against than others: one species of the faults alluded to, is that which must strike every person as such, the other is what would only appear as such to a Drawer, or other person well acquainted with the business; or (more briefly) one kind is what only can be seen on searching for it; the other is what will force itself to be seen.

The kind easily distinguished by every body; as far as relates to putting on, is, when a joining is very badly managed, or when the face of the drawing, exclusive of the joinings, is very uneven, of course, in putting on a pattern, these are of the first consideration, for a failure in either of these cases, must, in a greater or less degree, hurt the sale of the work; people being displeased with something that is faulty, though they

Of putting on the Block.

they may not be able to specify why it is so ;* for if indifferently executed in these material points, no cutting, no colour, nor any operation that is to follow, can ever make work appear as it should do, cover the faults just specified, or compensate for others less likely to be publicly noticed ; and to point out more particularly the consequence of these circumstances not being attended to, how many prints that have been executed in the country, as well as many that have been executed in town, have been thrown by, from the circumstances of not joining well, or having an uneven face, though perhaps nicely drawn, and excellently cut.†

* While work sells well with very capital faults, which sometimes happens, a Draper does not always concern himself much about them ; but when work of such a complexion cannot be disposed of, then he may be expected soon to point them out ; and then no Callico-Printer need be informed of the use of a Draper's damage-book. It may be even said, for true enough it is, that when tolerable or good work does not go off, some few Drapers are pretty ready at discerning faults, or even magnifying those that are trifling.

† Of late the aspect of some country-work has improved, but this is a point that will be spoken of in another place.

Of putting on the Block.

From all this, the attention of every one is pressed to what has been advanced, as well as to what will be displayed further on, and the more it is attended to by a Drawer, he will be the abler to add many articles as he proceeds, which only his own observations and experience can produce; and which every fresh pattern that he may have to put on will furnish him with; for mechanical as it may seem to some to put on well, it is very far from being so, as in many instances the judgment must be employed, and judgment can only result from experience or close observation: as for the rules which follow, if ten times as many could be displayed, they would not be much more than general ones, almost every pattern (as just hinted) requiring something to observe, which no rule nor precept can thoroughly supply; and, let it be remembered, that if a person with all the advantages acquired from genius and general experience, be liable to err, how much more so is he who has paid but little attention to what ought to have been his immediate concern; especially, if he considers, that in every stage of it, something may occur from causes too difficult and numerous to explain or exhibit, which the utmost precaution

Of putting on the Block.

tion cannot prevent, nor the greatest experience account for whenever they do appear.

As a word of advice, the writer adds, that as much as possible to provide against inaccuracies, a Drawer should not rely on his own judgment in cases out of the common way, whatever he may think of his sagacity, or faculty of preventing mistakes; for let him remember, if he errs, his mortification will be in proportion to the value he sets on himself; and so likewise will be the triumph of those who can detect him in an error; but by taking the opinion of others, * if a failure happen, his own mortification, and the triumph of others, will be proportionably decreased: In few words, absurdly vain and arrogant indeed must that artist or workman be, who will take on him to conduct an operation without failing in any respect; and proportionably weak must that employer be, who ever looks for it from an operator the most reputably perfect.

* See Rule 34 for putting on.

Rules &c. for putting on.

WHEN a Pattern is given to the Drawer to be put on, the first thing is to note what sorts of blocks it requires, whether with hard or soft faces, whole or joined ones, crossed or single oak or other backs, the grain lengthways or crossways, &c.

Under these considerations it may be observed, that if it be a close small Pattern, a clear whole face is best; and if nice in the joinings and will require smart knocking with the maul, firm crossed oak backs are generally preferred: * If the Pattern be pretty open, the joinings not very nice, and the grounds not difficult to hit in, the warping is not of such consequence, as if otherwise, and therefore, larger blocks with joined faces may do; and as light patterns do not need much knocking, deal backs may answer.

If

* The Writer's opinion is more in favour of sound single oak backs, with stout dove-tail backs let in crossways:—See the section on blocks.

Rules &c. for putting on.

If the Cutting be coarse, and can be made to work without hatting, soft wood is preferable to hard, although the soft wood itself may need hatting; but then the bondage for the hat may be much larger.

In some instances, where solids are wanted to furnish, and they are not very large indeed, sycamore or some other spungy wood is still better.

In respect to work that is quite with the grain, it seems that the grain of the face should not entirely correspond with it, as fine lines lying with the grain, and with the bottom proportionably slender, cannot stand very firmly, especially if cut deep; therefore in this case, if the grain be rather waving or curly, the work will have a firmer bottom; indeed if the work be of such a nature that a strong or coarse bottom may be left, it cannot be the worse for a strait grain.

It is, however, very faulty where a pattern chiefly consists of fine lines or shades, to put them on across the grain, and therefore in such cases, it is needful sometimes that the grain be across a block.

It

Rules &c. for putting on.

It is full as bad, and under some circumstances, much worse, to put on work with a fine face on a beachy block; as in printing, or even under a Cutter's hands, the surface will crumble away.

Other circumstances may spring up which cannot be precisely ascertained, but by attending to the above particulars, many of them may be obviated with very little trouble.

2. Take notice, or discover in what particular the pattern consists, whether in respect to the colouring of it, or the size, quantity, or disposition of the commanding objects; or, if a trail, whether it be upright or meandering, close or open, and the like;---which having ascertained, consider how to preserve or produce that effect on the cloth, against the chance of indifferent cutting, printing or colour; at the same time consider where it may well be altered, or what may be left out in the cutting, [†] or eased in the penciling; or, in other words, how it may be executed with the greatest ease and least expence.

[†] This may not please some cutters, but the Writer makes equally free with masters, as will appear.

If

Rules &c. for putting on.

3. If the pattern be on so large a scale as to require it, be informed of what width the cloth is for which it is intended, or on what it is most likely to be worked, on account of the joining of the selvedges; making some allowance for the variation that will happen in respect to the width of cloth of the same kind.

Small patterns, it may be observed, cannot be affected in their appearance by the joining of the selvedges when made up: the rule particularly alludes to furnitures, whether trails, sprigs or stripes; for if this circumstance be not attended to, much of the cloth will be cut to waste, or the joinings of the selvedges will have a very awkward appearance; and it is not every Upholsterer or Mantua-maker that is very ready at joining a Pattern by the selvedges, even if contrived in the best manner for that very purpose.

It is likewise necessary to attend to the above rule, in regulating the width of the Print, on account of the off-edge printing; as printing an edging with a fine print does it considerable injury; besides, if the edging be printed as the piece goes on, the colour gathers on the off-side of the print, and causes an, otherwise, unnecessary brushing

Rules, &c. for putting on.

brushing of it, or a very bad impression at the beginning of the next table; and if the edgings are left till the whole piece is printed, the edging is frequently fuller or barer than the rest of the work.

The observations on Squaring a Block comes in here properly, but being made a section of itself, it is considered further on.

4. If you have to make out the pattern, as it often happens, from a small part; and you mean to copy exactly that small part, * take care that the repetition be not visible, and that one part does not appear heavier than the rest, and therefore, if it be a trail with objects on it or about it, observe whether the objects, the trail in general, or any particular part of it soonest catches the eye; if it be the objects that are most striking, they must be properly disposed first, or at least their intended situations marked out, and the stalk or trail then drawn to them, taking care at the same time to balance and uniformly mix it: If it be the trail only, or any part of it that strikes most, that, by the same rule, should be marked out first, for these most essential parts being judiciously or advantageously

* The repetition of a small part is, however, very hazardous, for though not visible on the block it may be so in the piece, as it hangs on the rolls.

Rules, &c. for putting on.

vantageously disposed, it must consequently follow that the remaining subordinate parts may be made to compleat the uniform appearance of the whole, with proportionably less trouble.

In order to be certain of the joinings exhibiting as even an appearance as any other part of the face, let your joining (if possible) be taken from about the middle of your sketch when made complete.

5. If the pattern you have to put on, be composed entirely of objects, or in which the objects are the commanding part, that stand promiscuous, as fig. 1, whether close or wide apart, be careful that one part be not more crowded, or the objects larger than in another; for nothing is of greater consequence to guard against, as it is obvious to any person, when the aspect of a Pattern is unequal on a piece, or even when made up.

As it is very difficult by the eye to keep objects promiscuously situated, and at the same time preserve an even face, the following expedient is offered to accomplish it, when the objects are not very close to each other, or not of a long or straggling shape, as fig. 2, 3, and 4, as then it is best to set them at equal distances, and vary the face by turning the objects about in as many different directions as you can, or that the nature of the pattern will allow.

Rules, &c. for putting on.

Rule a number of lines, as you can best make out, from the pattern, according to the distance the objects stand from each other, as Fig. 5, which done, place an object in every other square, as fig. 6, that is, one at the top of a square, another near the middle, another near the side, and so on, thus will you be certain of the objects having a regular appearance in the general disposition of them, and at the same time standing promiscuously.

6. In order to ascertain on the paper on which you make your sketch or tracing, the joinings of trails as well as of sprigs that are irregularly disposed whether closely or widely situated, make use of this method.

After you have made your sketch or tracing, repeat, either on separate papers, or on one large enough for the purpose, as much as is necessary to shew the joinings at the head and sides, in order to supply that which is defective or remove whatever may be improper; having done this, hold it slopingly from your sight, and look at the whole from top to bottom, from side to side, and from corner to corner, to see that no lights nor heavy lines nor bodies of objects appear, and as there is generally in trails what may be called the main stalk, see that it branches out regularly from side to side, so that one side balances the

Rules, &c. for putting on.

other, and that the branchings so run into each other that it may seem to flow regularly all over, and to be still more certain of its even disposition, hold it with the back towards you betwixt yourself and the light, that by seeing it reversed you may know if it lean more to one side than the other.

7. In small patterns it cannot be amiss to put on the halves or quarters exactly alike, according to the nature of the pattern,|| taking care that the halves or quarters are not to be distinguished, in the repetition of them, for the conveniency of one block answering for the grounding of each part after it comes off the grass whether the pattern was intended to be so grounded or not; for which purpose, as rubbing off is the least certain method, an oiled paper, or a drawing from a stencil is to be preferred, and a stencil seems best, because, as it is only a part of the pattern that is affected by the grass grounds: except when composed only of plain set objects. If openings are cut in the stencil to fit the places that are either to be covered by the grounds as fig. 7, or left open by them, as fig. 8, their situ-

|| Meaning that unless it is on a small scale, it is unadvisable to do so, from the great difficulty of preventing a repetition being seen.

Rules, &c. for putting on.

ations may be easily ascertained by marking thro' these openings with a tracer or pencil, and then the other parts of the pattern may be added in whatsoever manner the drawer most approves.

8. Endeavour to keep all sprigs, or bunches of flowers, or even single flowers, whole on the piece, and likewise the main stalk of a trail, if you know what will be the width of the cloth : as it will be of some importance in the sale of a piece and the making of it up.

This leads to the observation that a Printer should not let a sprig, or principal flower, or other object get off the edge one side or the other ; for in the case of sprigs, &c. standing wide apart, he may try, at least, on cloth of any width, if he can preserve them whole without leaving too broad an edging on either side.

9: A pattern with six sprigs or commanding objects standing as fig. 9, cannot join whole or in halves, but must drop or rise one third as fig. 10, or the objects will not be at proper distances in the joinings, but then, of course, the pitches must be made to answer in the same manner.

In

Rules, &c. for putting on.

10. In transverse patterns, that is, in patterns in which the trail lines or objects run across from corner to corner, the way as represented by fig. 11, whether in stripes or all over, let the transverse disposition appear on the cloth the way as shewn fig. 12. as it will thwart the right hand disposition of the parts of a pattern generally observed in drawing, and the aptitude we usually have to look from the left to the right; as the light is from the left, and the hand in drawing naturally tends that way, otherwise we should be always incommoded by the shade of it.

11. The straiter the work is of the side or near the edge, the better it is, as there will be the fewer gaps, and the necessity will be obviated of having (what the Printers call) a list to make up the deficiency, and less will be cut to waste in the making of it up.

This rule, however, should not be so strictly adhered to as to make the joinings too nice, by cutting straight through every thing, or particularly through a number of objects; for the more they can be preserved entire, the less injury is done to the pattern, as the print being pitched too

Rules, &c. for putting on.

too high or too low, or too close or slack, renders them all unshapeable; it is likewise better to keep them whole on account of the grounds, especially the grafts ones, as they by being disjointed must add to the bad shape of the objects; but, as it may happen that the breaking of the objects is of little consequence from their shape or situation, or that the ground-work may be of more consequence to preserve; the above observation must be regulated by attending to what are the characteristic parts of the pattern, or what first catches the sight, and these must suffer the least possible injury, whatever may be the fate of the subordinate parts.

12. If some part of the pattern be coarse or have a body, it will not allow the fine parts to be so close or so fine as they otherwise might be, as the quantity of colour requisite to supply the solid parts will choak up those that are close, or cause those to work coarsely that are fine; and here it may again be observed, that though neat drawing on is to be commended, yet, if not drawn sufficiently open or clear, where for instance, there may be shades or shapes as fig. 13, 14, and 15; though cut by the best cutter, and may appear tolerably

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tolerably open and fair on the block, they will not appear so in the impression, to say nothing how they may suffer from a bad cutter or printer, or from being printed on coarse cloth, or when half worked out; for a print should be calculated to work decently when a certain quantity of work generally expected to be executed by one is nearly compleated, and therefore (to give some instances) in drawing or cutting shades as fig. 16, 17, it is not adviseable to put them on in that manner, however graceful they may appear on the block or even in the cutting, because the colour will hang in the corners and give the work a clumsy appearance, hence to cut them with less of a curve as fig. 18, 19, they will, by working clearer and neater, amply compensate for such a deviation.

13. Avoid, if you can, having any part of a close trail as in fig. 20, at the head of a print, as the pressure from the pitching of the print will render it coarser than any other part of the trail: the pressure however may possibly be prevented by the pitch pins standing out farther than common from the work: for which preventative see the rules for making pitches.

When

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14. When you have shades, as fig. 21, or particularly lights standing or running with the grain as fig. 22, 23, be careful to have them cut sufficiently open, otherwise you will be deceived by their working closer than intended ; for when a print gets moist, the opening closes considerably, and what may have appeared open in putting on, or when cut, will be choaked up in the printing, especially if cut with a thick knife, or if not sufficiently cleared at the bottom and sides.--- See more respecting this article in Rule 6, for cutting.

15. In joinings either at the head or side, the more a stalk or trail joins in this upright direction fig. 24, the better it is for working, instead of joining fig. 25, as the best Printer cannot at all times, on account of the varying of the cloth, keep the joinings so well in command at the side as he can at the head.

16. In drawing leaves or sharp-angled objects that are to be pencilled, it is recommended to terminate them as fig. 26, 27, or fig. 28, instead of fig. 29, 30, 31, as such a finish will keep the penciling, particularly the blue colour, on account of its thickness, from being run into

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the white, or the ground; for without such a filling up of the ends, the pencillers will either leave a light at the corners, as fig. 31, or, in endeavouring to fill them up, they will be apt, from the largeness of their pencils, to come over the line, as fig. 32, and the same observation will hold good respecting every other place where the pencilling goes into corners or angles.*

Note. In calculating the expence of pencilling, and thereby fixing what quantity should be in a Pattern, a certain number of strokes or dashes, which a Penciller is supposed to make in a stated time, is worth a certain price.

17. In putting on the block, nothing is more deceptive than having to leave lights in dark grounds; for if any shape is drawn fig. 33, you may be deceived when the ground is filled up, as it takes in the line you have drawn, and makes the light within-side appear less; it is still more deceiving if you have to draw the bondage as fig. 34, as its thickness gives the whole object a larger appearance than it really has. Here it may be noticed (though touched on before) in putting on

* An imperfection of this kind runs nearly all through the work of one of the first Printers about town.—This, with similar observations will be enlarged on, in the progress of this work.

Rules &c. for putting on.

on a print that is to have a thick boundage, see fig. 35, particularly if it is to be a doppy, that the shades and other work within side see fig. 36, must be kept sufficiently clear and open; or the weight of colour requisite to furnish the boundage, or doppy, will be too much for such close shades or fine work. Observe likewise if there be lights as fig. 37, to give intimation to the Cutter to strike the ends with a small gouge, as fig. 38, which will prevent the colour from hanging in those otherwise sharp ends.

18. In drawing on grounds that have large bodies as fig. 39, that are to work in thin colour, especially if they stand wide apart, remember that they will in the working, from the sinking or spreading of the colour, and its adherence to the sides, make larger impressions than the surface of the cutting otherwise would; hence they should be proportioned to that circumstance, and put on perhaps smaller than they are in the pattern. And as the pale colours worked with such solids, will be lost, or appear much paler when impressed from fine lines or pins if on the same block; therefore in such cases separate

C 2 grounds

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grounds should be had for the fine parts or for the pins.

Under this head would be considered the drawing on blotch grounds, and the other grounds that fall into boundages, but as the cutting farther or less into the boundage is partly regulated by the thickness of it; no precise direction can be given, as every one knows the circumstance to be attended to, in this case, is to prevent any light edges from appearing either within or without the boundage.—See more to this purpose Rule 7, under the article Cutting.

19. Wherever there are to be pins, mark them on the block previous to its going into the Cutter's hands, that the wood be not chiselled away, and where the pins touch or join the cutting, mark them accurately, and give intimation to the Cutter, that the ends of the shades or stalks may be cut downright, otherwise a disagreeable gap will be left, as fig. 43; and in ascertaining the sizes of pins, be aware that as the wood gets coarse by working, the pins sink in, from the repeated blows at the back; and if worked in colour that has any corrosive quality in it, they soon get finer; hence if provision is not made for these circumstances, the impression of the wood

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wood and pins will in a little time be very disproportioned. It is likewise needful to inform the Cutter of what quality the pins are to be, that the depth of the chiselling may be regulated accordingly.

20. In ruling Bengals the following mode is recommended, in order to make the ends join each other, (provided the block has not been too much warped, or any particular accident happened.)

Make on a slip of thick paper, or rather thin lead, with which tea-chests are lined, as many divisions as you have Bengals to put on, then fixing it to the square line at one end, prick through the divisions on the paper, and transfer them to the block, the finer the pricked holes the better; having done this, remove the slip carefully to the square line at the other end, taking care that the two extreme holes answer to the corners of the square, and prick through the same divisions as you did before; then rule as usual from the pricked marks, thus will each end of your square be a correct copy of the other; but as the ends of Bengals are of most consequence to preserve, it may not be amiss with a sharp thin blade, to cut a little into the wood at each end.

Rules, &c. for putting on.

21. If it be a joined block that you use, take care that the joint comes between the Bengals, and as a preventative against the consequences of a print with Bengals warping under the Cutter's hands, it may be necessary to let one end of the Bengals be cut thicker than the other; see fig. 44, and make the ends join by cutting away from the broad ones, when the print goes to work; or whenever Bengals do not pitch to themselves, that is, when they join by pitch-pins, it may be useful to cut both ends, as fig. 45; and in the joining let the points run into each other, as you thereby prevent the disagreeable appearance that the junction has when two square ends join badly, as fig. 46, but in the other instance, at the worst, they will appear as fig. 47, which is considerably better.

22. When you have a number of set objects, such as rosettes, rings, leaves, &c. to put on, it being very difficult, if not impossible, to trace or draw them alike in the usual way, it is best to have the objects cut accurately, and impressed or printed on the block, which if you can do clear enough

Rules, &c. for putting on.

enough to cut from, it will save much time and labour ; or if you cannot do it so smartly as you wish, make a mixture of lamp black and flake white, so as to be about the hue of black lead, the paler the colour the better, and let there be little, if any, gum in it ; spread this pretty thinly on a piece of soft leather, and so take off your impressions on the block, which done, draw over the objects, so printed, with well-tempered carmine (some add gum bogia) and when finished clear away as much as you can of the colour you printed on, with a piece of stale bread ; for if you use India rubber, it will change any colour which has gum bogia in it, to a very dark and dirty one.

Another method is by printing your object on paper with a proper mixture of carmine and treacle, which a little practice will ascertain, and then rub it off from the paper on to the block ; the advantage of which mode is, that the colour does not speedily dry, so that you may take what time you please in rubbing it on ; but the neatest method is by the object being engraved, and then taken off on paper, either by hand or a press, in the red oil colour that is used in the printing

Rules, &c. for putting on.

printing on paper; which not speedily drying any more than the treacle colour, it may be rubbed on the same manner.

Other methods of a similar kind for another purpose, are proposed further on.

23. If for any particular purpose you want to fix your colour on the wood, a thin white transparent varnish will secure it; or if you use a black lead pencil only, strew some powdered rosin all over, and then move a hot iron about at a little distance over it, by which method the rosin will liquitate and form a kind of varnish over it; or what is still more simple, if you only draw your tongue wet with saliva, over a black lead drawing, and let it dry, the black lead cannot be easily removed.

24. When you have a pattern to put on, consisting of very small objects, very closely and promiscuously situated, an eligible way to preserve an even face, is to take a small portion of the square of the block (in some cases half an inch will do) and see how many objects will go in it, and then repeat this portion on another paper, to what size you please; varying the disposition of the objects as much as the pattern will admit, in order to prevent the appearance of a repetition.

Note, Small close patterns will well bear enlarging a little, else on the cloth they appear smaller and closer.

25. As circles, rosettes, and other common objects, are always in use, it would not be amiss to have punches of different sorts and sizes, to use occasionally on paper or blocks, particularly where the objects are on dark grounds, as fig. 48, or have a thick bondage, as fig. 49, as the object impressed on the wood will be visible to cut or gouge from ; or if the impressions suffer from damping, they may be drawn over in red, and thus from their accuracy much trouble would be saved ; or if you want a solid object repeated accurately, it may be managed by stencelling it, that is, by an object as fig. 50, cut out of a piece of oil-skin, a piece of thick paper rubbed over with bees wax, or a piece of thin sheet lead, and then lay the colour on with a pad, or in what other manner you find convenient ; or if you want to do something like fig. 51, it may be managed by cutting out the object nearly all round, as fig. 52, leaving just joining enough to prevent the inner piece from falling out, the impression of course will be imperfect as fig. 53, which imperfection must be made good by the pencil.

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26. As sometimes on emergency things cannot be got on too soon, you may, after having put on the print, trace the same accurately with a firm oiled paper, and then retrace it on another block, or at least those parts that the ground which you mean to put on, falls into, or joins; on which accordingly draw your grounds; but strict charge must be given to the cutter that he does not deviate in the least from the drawing.

The advantage of this mode is evident, in having the principal grounds ready as soon as the print; and if they do not exactly fit, perhaps a little alteration may make them; and that is better than setting some prints to work before the grounds are cut, as then whatever is amiss in the impression of the print, must remain so.

It is however suggested concerning this article and the preceding one, that they should only be used in cases of absolute necessity, as their neatness and accuracy cannot be much insisted on.

In fact, every one must grant that any operation, especially where contrivance is necessary, and has to go through many hands, if executed with precipitancy, cannot reasonably be expected to be free from some fault or other; and in this instance it most undoubtedly is requisite, that, with very few exceptions, prints and grounds should be adjusted to each other before they go to work.

27. In finishing the joinings of some certain prints it will do no harm, to let the ends of stalks or objects, that join at the heads and sides, be a little too long, it being an easy matter to pare or cut away what is superfluous; or sometimes if particular parts of a joining are suffered to remain rather longer than might seem needful, as fig. 54; they prevent the appearance of a break in the stalk, see fig. 55, 56, 57, if the print is slackly joined.

28. Avoid so disposing of a leaf, a flower, or several stalks at the corners of a print, as to require four joinings to bring them together, see fig. 58, 59, 60, but, if possible, let the corners of the square fall in some open or blank part of the pattern, as the joinings are less likely to be perfect at the corners than any where else.

The above rule, it may be observed, chiefly respects patterns where the work is close, or the objects small; as in loose patterns, or where the

Rules, &c. for putting on.

Objects are large, and light of work, it may not be of much consequence where the joinings are made.

N.B. In joinings it is perhaps best not to give much latitude to Printers, as it thereby makes some of them more careful in the joining, and rarely satisfy them how the grafts grounds fall; for if they know they may run their joinings a little, they will be apt to over-run that latitude; It is however necessary to inform them what work is to be grounded, that they may be accordingly careful in pulling over their pieces, and folding them smoothly and even. The Foreman of a shop should be informed of the design of every pattern.

29. Instead of the common way of making out the joinings, by rubbing off from black lead, or by an oiled paper, the following mode is offered where particular nicety is required, at least it must be something more certain, from the circumstance of one side and end being cut, than the usual mode, as there is always a probability of the Cutter deviating from the drawing, or the marking out of the joinings.

After

Rules, &c. for putting on.

After having regulated your joinings, draw or finish one end and one side, as you mean it be joined to the others, leaving the other end and side unfinished, at least within a quarter of an inch, or perhaps less, where the joinings are to be made; then let the end and side that you have drawn perfect, be cut a little way in the work, and likewise the squares; then dab a little treacle and lamp-black on the edge of the part that is cut, and lay over it a slip of strong paper, and press it sufficiently to receive an impression, taking care that you take the impression of the squares, unless you chuse to prick through the two corners, for the purpose of transferring them to the other; either way remove the paper carefully to the other side or end, by joining the squares that you have rubbed off, to the other squares, or fixing the pricked holes to them: then rub the impression which you have received from the end or side which you have cut, which will convey it to the block, to which impression you accordingly have to make good the drawing for the joinings. ---In some cases it may be more convenient to let the print be cut all over to within a very little of one of the sides and ends, observing the same process of rubbing, as before suggested. Or,

by

by putting temporary pitches at a distance from the square, at the bottom and off-side, and having holes or pins to answer to them, within the squares, and at the same distance from them, if you strike an impression on paper, and then join it, (observing to guard the blank part of the block from the dipping) you will have at once the impression of that part of the block which is cut, and by which you may the easier regulate the joinings.

30. In prints with sprigs that stand wide apart, or in very loose trails, if it can be done without hurting the ground, a few pins placed between, and filed nearly to a point, and rather below the surface of the wood, will keep the cloth down; and cause the work to appear neater, by preventing the edges of the objects pressing too much on the cloth; it likewise answers the purpose of keeping the substance of the block nearly equal, as otherwise a deal of wood must be hand-tooled out; and the hollows that remain must weaken the block, and render it more apt to warp, or perhaps split, if the print requires much knocking. In grounds where the parts stand far from each other, it can be done very conveniently, by letting these (what may be called) guard

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guard pins, fall into parts of the impression of the print.

It is granted that an objection lies against this observation, as the points of pins standing at great distances from each other, are apt to make holes in the sieve, or in the cloth, especially where coarse or too much blanketing is used on the table ; and if one thread of the piece is broken, it will in the process of copper or field-work become a hole ; therefore some caution is needful in this case to place the pins, not too far from the work, especially round the outside of it, so that the circumstance alluded to be prevented.

31. Where a print or ground is put on without any drawing, such as rings, bengals, that are executed with dividers, tracers, &c. so that only an indenting is made in the wood, if a thin mixture of colour be spread all over, and the block afterwards scraped with a fine edge, some of the colour will remain in the indentings or hollows, and be tolerably visible ; besides, by pursuing this method, if the wood be damped, and the indentings swelled up, there will still be

be some guide to the Cutter; in short, it will have nearly the same effect as oiling the wood where a curf line is cut.

32. In drawing for pinning, be aware that though in the drawing, your lines may appear to stand distinct as fig. 61, 62, 63, yet the print when pinned will not have that appearance, the certain vacancy between the pins destroying it; as the pins will appear as fig. 64, 65, 66. Observe the same in drawing lights in bodies of pins, as fig. 67, for though the object may appear tolerably shapeable, while only as a line, yet it will be destroyed when enclosed in pins as fig. 68, therefore in such cases, let there be a proper openness observed or provided for.

33. In drawing pinwork for cylinders, recollect that there will be some difference between the width of the surface of the pins, and the bottom of them which in rings, rosettes, &c. will be of some consequence.

Rules, &c. for putting on.

34. In adjusting the joinings and pitches, it may not be amiss, indeed it is necessary, if there be among the Printers, one who has a general judgment, to consult with him respecting them.

35. Though the following observation more concerns the designer, yet as the putter-on is sometimes left to his discretion, it is intimated here that pin shapes for leaves are bad for pencil-ing two colours, viz. the blue over yellow, or yellow over blue, as the blue and yellow are never so exactly on each other but that they are seen at the edges; and so likewise are the edges of leaves or other objects of this kind, fig. 106*

of.

• This kind of refinement is what the writer several times points out as objectionable in the patterns as executed on the cloth by some of the first Printers; in one ground, almost all the leaves (as mentioned already) are of that long shape, fig. 110, so as to heighten the inconvenience when form'd with pins; and in another, (perhaps the first in this country, for the variety of patterns it has produced, and the taste displayed in them) those leaves fig. 111, are very frequent: but the ill effect is at all times visible, though the pencil-ing is as neat as can possibly be done here; therefore the drawing on paper should be regulated in a degree by the similitude that is attainable on the cloth; and, according to the principle of keeping the last stage in view, a little deviation had better be made from the original, though in respect to itself not bettering the appearance, provided it tends to give the whole a better aspect; and particularly so, if it renders the operations easier, or more facile, in any of the branches.

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and of pin shapes, those are the worst that are in this form fig. 107 on account of the sharp end; but, if such shapes must be retained, it is advised to end them thus fig. 108. Besides, there is another inconvenience attending pin shapes, indeed a general one, which is, that the surfaces of the pins continually get finer; hence, if not put in as close as possible to each other, or if put in of the smallest sizes, (speaking of them as boundages for colour) there soon will be very little line to be seen; and every one knows pumicing them must render the wood-work coarser; and it may be said too of this kind of shapes, fig. 109, that a small accident or little violence soon breaks them; or if the texture of the wood be not very firm indeed, they soon crumble away, or work gouty.

36. Observe as a general rule, that pins and wood never work well together, especially large pins with fine cutting, or fine pins with coarse cutting, and particularly where they stand close to the wood. — See Rule 19.

37: In drawing on grounds that are to work in thin colour, if they have shades, or other long and thin shapes, terminating in points, remember that such long shades do not shew as such, even if very wide apart; and if put close together, they blotch up; therefore in many instances they should be drawn rather longer than apparently needful, and the Cutter must be directed to cross the ends with his knife.

Of Pitches.

IN the first place it can never do any injury always to have squares cut at the corners, and oftentimes in the middle, both of ends and sides, the necessity of which the nature of the pattern will determine ; but at any rate (as above said) they are needful at the corners, as they determine when you join the print by them, whether the pitch-pins are on the square or not ; and that you may the better join the print by the squares, let the shape of them be as fig. 69, or rather as fig. 70, to hinder the clogging of the colour in the corners, unless the situation of the work hinders their being so cut, and let them stand out as far at least as the pitch-pins ; because in the first trial of the joinings (supposing the squares are cut as they should be) the print may be joined by them, as the pins may be then adjusted, if not put in right, or if moved by any accident.

If it were not for the conveniency of joining by the squares, instead of the shape above recommended, it would be best to cut them as at fig.

Of PITCHES.

71; but however, when they are cut as fig. 72 (for as fig. 73 they never should, though too commonly done so, as the impression gives no certain shape) they should not be drawn on the ruled line, as the ruling will perhaps misguide the cutting of them; and if the squares are left for the purpose of ruling grounds from, they should be drawn within the square line.

2. At the head the pitches should stand out from the work near one quarter of an inch, that the wood may not press on the cloth in pitching the head of the print, and of course appear heavier than the rest of the work.

The first pin at the head should be at least one quarter of an inch within the square line of the near side, for fear of the near edge running on the table; the second pin, for the convenience of the off-edge printing, should be regulated according to the width of the print, and of the cloth it is likely to work on; for if the width of the print is such, that the edging is less than half that width; which by the way is a bad circumstance for the face of the print (as observed already) there is no occasion for a middle pitch, either

Of P I T C H E S.

either for print or grounds; and the fewer pins for pitches is always the better; for if the first pitch should get off the near edge, the Printer, for the sake of the grounding, must get on again if he even makes a cut: as for the third or off pin, it is little matter how near the off-square it is, so it does not stand out beyond the line of the work on the off-edge, as it then would be particularly liable to accidents.

3. As the pitches of the print, from their outward situation, are in danger of being removed or otherwise injured, it should be a rule to put stout pieces of wire deep in the wood, rather slanting, and lessen the tops with a file or other instrument; and in case the print should run on the table, it would not be amiss, especially if it be a close one, to put pins at the off-edge, unless the shape of the work will answer the purpose, to fall into certain places, in order to fill up the vacancy, if there be any of consequence, at the near edge. Likewise for fear the print should come off the near edge, and of course the side pitches for the grounds be rendered useless:

Of P I T C H E S.

useless: let there be a pin at the bottom of the ground to fall into the work, if it can be so managed, at the bottom of the print.

4. The first side pitch should be about half an inch down the side, the other as near the bottom as convenient, and if it can be done, let them pitch into objects so that they be little seen, taking care however that the joining of the print does not obscure them. Side-pitches need not be out farther than just to be clear of the work; in order to prevent a light edging.

5. The pitches for the print being ascertained, put in the pitches for the grounds which work next in succession; these must be distinct from the pitches of the print, and be clear when the print is joined; one pin towards the bottom of the near side is sufficient for the ground, taking care to place it below the side pitch of the print, that it may not hinder the printer from seeing his print pitch; this however is not necessary to be particular about when the ground pitch is placed within

Of P I T C H E S.

within the work: Endeavour likewise at all times to make one pitch or a shape do for as many grounds as you can, observing however, that a ground that works to another ground ought not to pitch to the print.

6. If the work is to be grounded after it comes off the grass (as you can make no alteration then) be particularly careful that the pitches for those grounds be not obscured by any means, and if you can place them where pale colour only will cover them, it will be the better, as that will partly hide them; and let them be but just large enough to be seen, which rule indeed should be carefully observed in respect to pitches in general, or if large pins are put in, the tops should be lessened.

7. To be more certain of having your pitch pins in their proper places, they had better be put in before prints or grounds are given to be cut (unless you have no doubt of the carefulness of the cutter, in that respect) and before your prints or some

Of PITCHES.

Some certain grounds go out, be sure to rub off parts of the drawing on paper, making a memorandum what parts you rub them from, as they will be checks against the cutter in proving whether he has or has not deviated from the drawing, and probably prevent a deal of altercation, when the work is done; or, as a further caution,* the whole face joinings and all may be procured, by damping a stout piece of paper, laying it on the surface and gently rubbing the back, till you have a slight counterpart of the drawing; and a very slight one will be sufficient to shew the trail, or the shape and situation of flowers, and other objects.

A Putter-on

* For if a Cutter has a pique against the Drawer, or bears ill-will to the master, or if only through wantonness he may alter the joinings, the direction of a stalk, or shape of an object, or in grounds, he may cut out of shape, or move an object out of its place (for such things have been done) and then, without some check, what can the Putter-on say in excuse, or how clear himself.

Of PITCHES.

A Putter-on, and indeed any other person, is likewise here advised for his own sake, to make minutes of what may have been matter of opinion or contention between his employer and himself about the mode of performing any thing when his employer or other principal has it done his way, and have those minutes ready to produce ; if, in consequence of such determination, the effect happens not to be as it should, or if the performance is not successful in other respects.

As well as advising a Putter-on to be guarded against the Cutter, the writer advises the Cutter to be on his guard, and that is, to see the rubbing-off performed, and that his employer keeps one in his possession, or else demand one for himself, otherwise it is possible the putter-on in his way, may do a Cutter an injury, by altering the rubbing off in some mode or other, and thus make it appear as if the Cutter had not attended to the drawing, or other particulars.

Of Squaring Blocks.

IN making a square (as it is always called) though the four sides are seldom equal, if a print is intended to be a 5 over on 5-4th cloth, or about 7 3-8ths wide, it should not be above nine inches long, it being handier for working, and not so apt to warp, as if longer in proportion to that width, and for very close fine prints that are difficult to join, the smaller they are the better, as they have less cutting, are easier to work, the warping is not of such consequence, and the grounds are more likely to be hit in, especially the grass grounds, and the best general size for them is about 8 by 6 and a quarter, or 6 and a half at the utmost, or what is called a six over, for to make it any thing wider under 7 3-8ths, so much cutting would be thrown away; as it would still be six over, and the worse for it, it then having to work a narrow edging on the off side, the inconvenience of which has been amply discussed.

Of Squaring *BLOCKS.*

2. For larger prints it is presumed the best general sizes are, for 4 overs about 12 by 9 and a half, for 3 overs 15 or 15 and a half by 13, but when a pattern requires a pair of prints or more, the length and width must be governed by the nature of the design; if not drawn to any particular size, unless the pattern would not be injured by altering it.

NOTE, In speaking here of 5 overs and 6 overs it must be understood (as before remarked) as referring to ell-wide cloths; though after all, (as likewise remarked) the best rule to abide by, is knowing what cloth is most likely to be made use of for the respective patterns that are determined on. The sizes however as above will nearly suit narrows, with one more over.

This circumstance of determining on the sizes of prints, is of consequence from other motives; for to have a print unnecessarily small (which is the case if the work be light and easy to join) is protracting the working of it, and increasing the expence attending its working, if on account of its smallness, the Printer requires a proportionable price; besides, such a print will be as much worn in doing a hundred pieces as, if made a little larger, it would be in doing twenty or thirty more; which altogether is of some importance,

Of Squaring B L O C K S.

portance, and must considerably outweigh the circumstance of its having cost less for cutting, if that had been an inducement to have had it cut so small.

It is however as necessary to consider what it may have to do in respect to grounding, particularly grafts-work; hence if the size is such that the grounds cannot be worked whole, the print in this case had better have been smaller, and this circumstance is determinable by the ease or difficulty of the grounding, for if the grounds are to fall into small objects or fine lines, the print should be small, or if it be larger the grounds must work in halves, unless there is good latitude for the grounds to fall, and then they may work whole with such a print.

3. In squaring a block the most expeditious and certain method, as well as of making the divisions, (if they are required) is to have a plate of copper or pewter, set out with a number of squares within each other, of the different sizes above-mentioned for 6-overs, 5-overs, and 4-overs, as being most generally in use; and set into as many divisions as you chuse, and at the

Of Squaring BLOKS.

Corners of each square, and wherever the divisions are marked, let there be holes pierced through, as fine and as strait as possible; you have then only to lay your plate on a block or paper, and with a fine needle prick through the holes where necessary, and then rule as usual from the pricked holes left on.

4. Another method is, by having a piece of thin wood or metal, made angular as fig. 74, which laying on a block or paper, rule two lines fig. 75, and then with your compasses or dividers (beam compasses fig. 76 are best) extended to the length of your print, fix one point at A, and make with the other a hole or curve at B, then put one point on the line as far distant from A, as, near as you can judge, what the width of your print is, and strike a curve as D, this done, rule a line from the bottom of the curve to B, fig. 77, then move your dividers to the width of your print, put one point at A, and strike a curve as at F, and with the point at B, make another curve, intersecting that at D; lastly, rule from the intersection to F, fig. 78, and you have your square.

But

Of Squaring BLOCKS.

But observe, that the truth of your square in this manner, depends on the just form of the two sides, from which you first rule, and of the instrument which you use.

This instrument, or the copper or pewter plate first spoken of, if it be cut perfectly on the square, will serve to try whether pitches stand square or not, by laying it to one of the ends and one of the sides at the same time, and repeating the trial at the other end and side.

5. If you square your block in the usual way, and have occasion to make divisions, divide into halves first; then divide those halves; then divide those quarters, and so on; instead of taking a certain part, and running the dividers along the line, because of the great probability that the same number of divisions run along in the same manner, will not form the same length exactly again.

6. In squaring a block for a stripe pattern, if it be on a joined face, take care that the joint is parallel to the side of the square, and (if it can be

Of Squaring BLOKS.

be so) in the most vacant place: to get it parallel to the square line, you have only to put one point of your compasses on the joint at one end of the block, and with the other make a hole or curve near the edge of the block, from which you mean to raise your square; repeat the same at the other end, and from the two pricked holes or curves, rule the line which is to be that from which you raise the square. This observation should be attended to in sprig patterns, or any other where the joint can be possibly avoided.

Of Cutting.

As a Drawer, or Putter-on, should study how to preserve the effect of a pattern before he puts it on, a Cutter should endeavour to preserve the effect intended; and if he has the interest of his employer in view, as well as his own, he will examine as far as his judgment lies, where it is defective, or any way improper, and not, as is too generally the case, think only of contriving how to make the charge as high as he can, (if the price be not agreed on before-hand) to such it may be hinted, they are ultimately not gainers, for it may be expected every employer will think first of those who think of his interest as well as their own immediate emolument.

From what is above suggested, a Cutter is not to infer that he is at liberty to alter the drawing or deviate from it as he pleases, besides, he should be very cautious in that respect, as he may not be aware what counterparts or checks are kept against him.

A Cutter likewise should consider when he takes any work whether he can do it well, if the putting on, or more properly the drawing, be indifferent, because if he does not execute it tolerably and alledges in excuse, it was badly drawn: It is the more inexcusable in him, as undertaking to execute what he knew he could not do as it should be; as among other reasons, it must go to

Of CUTTING.

work bad as it may be (unless it be too bad) from the impossibility of its being put on and cut over again in proper time. But much worse it must be in him who will proceed on his work, though it is evident to him, that from some mistake in inaccuracy, the article must be useless to all intents.*

As a general observation respecting cutting, be it noted that the principle of sound and graceful cutting (if the term may be allowed) depends on properly forming the knife, and having a good command of it; as for the shifts of pinking, and other expeditious modes made use of as substitutes for cutting, the face, from being forced or shattered by such modes, rarely works clean or stands well; and by those who require sound cutting, the use of such modes should be exploded, as more proper for carving; but in cutting for calico-printing (it is repeated) the knife, and that alone, can make a proper face, where strength and neatness is required to be combined.

* Sorry the Writer is to say that either through pique to the drawer, enmity to the master, or from that wretched groveling principle of such mischances multiplying work, he has known it to be the case, and he is not backward to own in cases where he has blundered, or not been sufficiently accurate (for he don't pretend to infallibility though he presumes to publish this work) he has experienced instances of such a kind.

Rules for Cutting.

1. A careful Cutter will at first look at the joinings and measure and compare the distances of the pitch pins, and if the pitch pins are only marked, he will be careful to put them in as soon as possible, as the deferring of it till the marks are so faint, that they are almost put in by guess, is productive of much trouble, for even the common practice of drilling or goudging for them, chisseling the wood away, and then driving in the pins is deceptive, the tops of the pins frequently not being where they ought to be.

If however the Cutter puts in the pitch pins he should not chissel the wood away till the rest of the print is finished, or if it is cut at home the wood should not be cleared away till it is taken to shop or some other proper place, as they might be removed even in carrying thither.

2. Let

Of C U T T I N G.

2. Let the difference between the surface and bottom of the work be just so much as will serve as a foundation for it, as every cutter should be aware, that if thicker, the print will work the coarser, even if the surface be fine, and the first time it is planed it will work very clumsily; as for the care of preserving a face, every tyro in cutting must know that is of the first concern, and of course the cutting of it away in any part, or leaving so little foundation that it is liable to be injured by the smallest accident, is the greatest discredit to a professed Cutter that can be.

3. Next to a proper foundation and an even face, a sound print is one where the work is not cut through, at the joinings of branches or shades see fig. 79, for where the knife goes thro' those joinings, especially if it be a thick one, or the wood very damp, it will easily be seen, after the print has been sometime at work, and lays in a

warm

Of C U T T I N G.

warm or dry place; but as in some instances it is impossible to cut in that manner, proper attention should be bestowed on those parts that are left without the support alluded to, that they have a firm foundation, otherwise the slightest accident will remove them.

4. Where pins are marked to touch the surface of the wood as fig. 80, cut accordingly, that is, down right across the end, or it will be the cause of much trouble both in drawing for the pinning and in the pinning itself, from the pins not being able to stand upright, nor join with the surface of the wood; but will leave disagreeable gaps as fig. 81, between the impression of the wood and pins; and if the pins are marked to stand near a line as fig. 82, carefully cut more upright than in general on the side the pins are to be, and cut deep or shallow according to the size of them.

5. Where pins are marked and have no cutting near them, leave some wood for the file to rest on.

5. If

Of CUTTING.

6. If you have to cut a curf as fig. 83, cut outside the line as drawn (unless the putter on has provided for the circumstance) otherwise the line of pins cannot be where they were intended; for the drawing being the line that the pins is to stand in, if you cut the curf through that drawing, it is evident the pinning must be within side of that line, because of the wood, as fig. 84.

In cutting lights with the grain, be cautious to cut with a thin knife, and rather slanting, whether you chissel away or not, or when the work is damp the wood will close in some degree, and of course appear in the impression not so open as those lights which are cut across the grain, tho in the cutting they were full as open.

It seems to the Writer, that in cutting fine lights with the grain, it is not the best way to cut downright of each side, and chissel away at the bottom, particularly if the wood be very dry or scarcely damp when cut, as the surface will nearly close when the wood gets damp, but rather to cut very deeply and take the wood out with the knife, for each side rising slopingly from the bottom, the chance of the two edges of the sur-

face

Of C U T T I N G.

face meeting together is not so great ; but as a counter-balance, the colour is more apt to gather than when cleared at the bottom with the chissel, therefore if cut slantingly and chisseled away with a very small tool, that inconvenience will be prevented.

7. Cutters are not sometimes aware how much they injure a block by extreme partial damping or letting it lay a long time on damp stones or bricks, especially if one end is kept damper than the other a long while, as the face is liable to come up in places by damping or wetting while there is nothing but the glue to hold it ; and as blocks are sometimes badly veneered, or may have lain long in improper places, or may have suffered by a removal from a damp place to a warm one and the contrary, there is the greater reason for a Cutter to be cautious in that respect, hence it would not be amiss as a Cutter clears away, or as soon as finished, if he secured the face by a few brads.

Note, The Writer purposely inserts the following article, though properly belonging to putting on, in order to lead a Cutter to look a little further than the point of his knife.

8. If

Of CUTTING.

8. If you have to cut from an impression always be informed whether the cutting is to be within the line, on it, or without it, as this circumstance is very often a mere matter of opinion, though at other times determinable by particular circumstances. See Rule 18 for putting on.

And, In paste grounds that have to hit to objects surrounded with stormont, or other close or solid ground, it is needful to cut within the line, for it is better the ground should come into the object than not come up to it, as that will shew a disagreeable run of white outside the line; but if the object is only to have loose ground work round it, it would be better to secure the filling up of the object: it is only suggested in that case to be better within than without, making some allowance for the spreading of the colour.

Again, if there be large and small bodies to work together in the same ground, as fig. 85, cut the small bodies rather more within the line than if they stood alone, as the quantity of colour necessary to be carried by the large ones and the blow requisite to impress them, would otherwise cause the small ones to spread over the line. See Rules 12 and 18 for putting on, where there are similar observations respecting both prints and grounds.

Of CUTTING.

Note; In speaking of cutting, it may be observed to those who prefer the useful to the superficial, that as what is required of a print or ground, is its being able to make a proper impression, and for a proper length of time, all that is done which does not tend to that point is delaying its going to work, of course, all that delicacy and formality in the subordinate parts of hand-tooling, chiseling, &c. which some affect, can only give a print or ground a good appearance, but does not enhance its intrinsic value in point of utility; as every one knows that the clearness and soundness of the cutting in respect to the face, is the essential quality that is desired; hence longer time bestowed in those particulars, more than sufficiently clearing the superfluous wood away, is, beside delaying the working of it (as above-said) rendering it unnecessarily expensive to the proprietor.*

The Writer cannot suppress the insertion of a word or two, as a hint to some Masters (though copiously discussed with similar matters in the essay.

* It is supposed the Writer will not be thanked by many Cutters for this observation, but as he occasionally makes free with Masters (as the following observation evinces, as well as many others, which will appear at the close of this publication, as likewise where he makes as free even with himself) he trusts they must acquit him of partiality in what he advances

Of CUTTING.

essay toward the conclusion of this work) that they do not always get their cutting done so cheap as they imagine, when they press a man down to a low price, for a Cutter who is a master of his business has a mode of working, not easily detected when he brings his work home, according to the price bargained for, or what he expects for it from his knowledge of his employer in that particular; especially if he knows his employers judgment of cutting is not very extensive.

As there is a wide difference between being imposed on, and getting work done for much less than it is worth, the writer just hints here at the impolicy of some, who when they get work done very cheap, (no matter through what motive it is so done) cannot be so far contented, but will speak of it, and will perhaps say who the person was, in order to induce others to do the same; the consequence may be a combination not to work for such a person; and any how it renders such a man unwilling to do work very cheap again: after hinting at impolicy on one side, it is proper to hint to Cutters, that it is equally impolitic to make a boast (particularly a public one) how expeditiously they can work, what excellent and peculiar instruments they use, how well paid they have been, &c. when this is the case, can it be much wondered that masters so often doubt the integrity of their workmen, respecting the value they set on their performances.

Of CUTTING.

This valuation of cutting is a disagreeable and difficult part for a principal to go through, if he is willing to give labour the price it deserves, or if he would avoid being deceived or imposed on; some leave it to arbitration, some fix a price at first, and others pay according to their ideas of its worth when it is done, or for what they can get it done; unfortunately each mode has its inconvenience; arbitration is often but another term for collusion, when left to other Cutters, and to many it is disagreeable, and perhaps injurious to interfere between master and man; as to fixing a price, though it may prevent some contention when the work is finished, it does not ensure good work (as above intimated) for as a man cannot always tell merely by seeing the drawing, what work there may be in the cutting, he accordingly suits his performance to the price; or if he agreed to do it well, he may use all the deceptive and expeditious modes that he can (as before spoken of) and lastly, to pay for cutting according to its worth, cannot be done without a consummate knowledge of the operation, which includes a knowledge of the deceptive modes that may be used, so as to make it appear sound, though it be really far otherwise.

It is not here attempted to offer a decision on the above observation, as that must depend on circumstances which will render one or the other

Of CUTTING.

of these modes most eligible to adopt ; it however is offered as an opinion, that generally speaking, the last-mentioned one is the most equitable ; but then upon that principle it can only be adopted by a judge of cutting, and such a one will endeavour to suit the quality of what he gives out, to the ability of the Cutter ; and of course makes the necessary distinctions in the estimation of its worth.

It is begged it may be observed, when speaking of expeditious modes, those are meant where deception is used to make the work appear well at first ; for it certainly ought not to be considered by a master as an inducement for a man to work cheap, if he can work more expeditiously than many others, so the work is perfect in every particular ; in fact, he deserves a higher price in proportion to his expedition ; for if he can execute a piece of work in 6 days, that another would be 8 or 10 about, and brings it home, it goes to work so much sooner ; and in many cases no master needs being told such a circumstance is of very material and pecuniary consequence ; but unhappily, workmen suspecting an advantage will be taken from finishing work very soon, and masters suspecting they are imposed on, by a deal of work being soon done, will, most probably, never suffer, in general, such an accommodation to take place.

Of Pinning.

BEFORE you begin pinning a block, especially if it is to be pretty full, a few brads drove in, in the vacant places or indeed all that are necessary, is very proper to be done, in order to secure the veneer from rising or removing, and if the pinning be very close or covering, take care that brads are first put in, punched down, and pegs put over them.

1. A block that has many pins to be put into it particularly if it is not a small one, should be hollow in proportion to the size and quantity of the pins, and should be in a dry state, for pins acting as wedges even in a degree when bored for, they naturally tend to throw a block round; hence if a block that has a great many pins, and particularly if they be large ones, happens to be very round when began to be pinned, the consequence perhaps would be its being rendered useless, from the extreme round state into which it would then be thrown.

This

Of PINNING.

This inconvenience may possibly be prevented in some degree where the back, or a cross back is but weak, by having a strong temporary back firmly fixed on.

2. It is usual for Pinners in pinning of blocks to begin at one end and work gradually on to the other, whether the pinning is full or not, but perhaps it would be more adviseable to do a little at one end, then a little at the other, then a little in the middle, and fill up or finish in the same progressive manner ; as, besides the chance of avoiding the partial warping of the block, you are more certain, by doing thus, of preserving an even face of pinning ; for it sometimes happens that pinning is fuller at one end than the other, or different in other respects, from being finished in a hurry, or put into another person's hands, and the like ; which would probably be avoided, by pursuing the method above recommended, or something similar to it.

3. Where large and small pins are to stand together, it is in general necessary to put in the large ones first, especially if they be considerably so, as by taking up the most room you will the better judge where to put in the small ones, and small ones can be the easier set to them.

Of P I N N I N G.

4. The quicker pins are put in, the firmer they hold; and the more uniformly upright they are put in, the evener they work; for if put in very slanting, the setting of them upright afterwards, loosens them at the bottom; and consequently in the course of working they will be easily removed, as well as by other common accidents.

5. If you have a number of large pins to put in, avoid (if the pattern will admit) two or more standing near each other exactly in a line with the grain, especially if not bored for, from the great chance of their splitting the face, by standing in such a direction.

6. If you have a flower, or leaf, or other object, as fig. 86, begin at the points, and then fill up the line as regularly as you can, that is, in respect to the distances of the pins from each other; If the shape be like fig. 87, begin at the points, and then fill up the line.

If

Of PINNING.

7. If you have branchings, sprays, curls, &c. as fig. 88, 89, and 90, take care of the line or stalk from which the others run or branch out, as these should be kept in as perfect a line as you can, keeping however the angles in view, that the corners may be open in making the lesser branches.

8. If you have small curve lines, as fig. 91, do not put a pin in the middle, as fig. 92, but rather put two, as fig. 93, otherwise it will have an angular appearance, especially if the pins be large.

9. Where pins are required to be placed near the cutting as fig. 94, the shade of the wood will frequently deceive the pinner, respecting the distance to be observed in placing the pins; in order to guard against this circumstance, frequently look at the block with the face held directly against the light.

Of P I N N I N G.

10. If you file the pins without the wood being wetted or swelled, do not file them even with the wood ; else in a very little time they will be too low ; as exclusive of the wood swelling by working, the repeated blows of the Printer at the back of the block, draw the pins further in, exclusive likewise of the pins wearing away, especially when worked in colour in which iron liquor is used. Observe likewise, before you begin fileing, if there be such a quantity of pins as to make it of consequence, that the face be even ; or as nearly so as it can possibly be.

11. If on any particular account, you swell the wood, observe that there be brads to prevent the veneer from rising ; this however is a bad method from the chance of the face being damaged by the file or pumice-stone, and consequently rendered coarse or gouty ; it is therefore better to file it in a dry state, without fileing so low as the wood, as the wood when it is damped will swell and be even with the surface of the pins, unless the pins are left very much above it.

12. In

Of P I N N I N G.

12. In bradding prints and grounds, drive the brads different ways, that they may have the firmer hold; a few brads well disposed of is better than a great many, as they act as wedges in the back, even if the veneer is drilled or bored through, and of course tend to throw some blocks round the same as pins would, as the boring for the brads must not be so deep as the brads are long, they then having no hold of the wood; and remember, in prints or grounds that have backs of deal, or other slight wood; longer brads than common are requisite; otherwise, from the softness of the wood, or openness of the grain, they will be of little service.

13. Take care that brads do not stand in lines close together with the grain, as the more diamond wise they stand, the better they hold; and consequently a less number will do; neither is there such a chance of the face being split.

Care should likewise be taken that brads are not put on a joint; it is however necessary where there is a joint, to put more brads about it than elsewhere, as well as round the edge.

Of P I N N I N G.

Note, It may be expected that more might be said about Cutting and Pinning, and more the Writer could have said, but as every Cutter and Pinner has something peculiar in the construction of tools, mode of using them, and the like*, (though some of the advantages they think they possess, are only of consequence, from that satisfaction which every person experiences in doing any thing his own way§) it would be to little purpose to give directions in many cases, even if it were possible to do it explicitly.

* Every one knows how workmen will contend about their respective excellencies: This however would be less ridiculous, if the contention was not too generally carried on in improper places.

§ The Writer here again makes a remark addressed to Masters (tho' touched on already, and will be more generally dwelt on with collateral circumstances, in the essay at the closing of this work) that half the facility of a man's operations (granting he has abilities) is owing to the liberty of following his own method, hence at a shop he seldom seems to do justice, or that what he does is done by a proper mode, it being too customary in Masters to be minuting as it were, how much is done, as well as perpetually enquiring how such a thing is to be done, or why not done in such a manner, thus the man (unless he is little solicitous about his

|(situation

Of P I N N I N G.

Hence the writer deems it sufficient to have attended principally to those matters which immediately lead to the point he all along wishes to be kept in view; that is, the effect intended to be produced on the cloth: but nevertheless, Cutters and Pinners may find in other parts of this work observations enough that concern them; though, (as already intimated) they are more conveniently introduced under other heads.

— See particularly Rule 1, 12, 14, 17 and 19 for putting on, as well as several of the Rules for pitches, and what is said about blocks.

situation) is under continual restraint, and consequently the progress of his work impeded, (to say nothing of occasional interruptions,) hence, few expeditious cutters as well as others, who can have business at home, though capable of doing much general service at a shop, have any inclination to be at one: It must not be concluded however, but that the progress of a Man's work should be looked after; what the Writer means is, that as no person is always alike able or disposed to work, it is more adviseable to form an estimate of his abilities, by what he can do in the course of a day or two, a week, or in some cases a month or more, and then set a value on him accordingly.

Of Blockmaking.

PREVIOUS to what the Writer has to advance on the management of blocks, a word or two addressed to Block-makers cannot be deemed unnecessary, as their inattention in general (if not entirely) to what he observes below, has rendered many prints and grounds of no use; while the fault has been attributed to causes very remote from the real ones. Therefore, if Block-makers wish for the credit of making firm standing or good working blocks, they should be careful, that, in the first instance, the faces and backs are free from cracks and shivers, and not tending to a decayed state no more than being too green, and that of crooked backs the backs are alike in age, texture and seasoning; indeed they should be cut not only from the same plank, but from the same part of the plank, else the resistance of one to the other cannot be reciprocal, and consequently the very purpose for which two backs are joined together is directly destroyed: *See the observation respecting cross-backed blocks further on.* -

Of BLOCKMAKING.

Block-makers should likewise take care that in joined faces, the pieces of the face be of the same part of the plank, as a joined face that has one side clear, hard, or strait grained, and the other soft, beachy, curly or knotty, is hardly fit for any purpose; the bad being unfit to go with the good, which is only proper for nice work, and the good part is thrown away if the whole block be used for something coarse, or of little importance; and even a whole-faced one had better not be so, unless the whole face is of the same quality all over; therefore two or more indifferent pieces of veneer had better be put together, as serving for something that is coarse, and the same of two good pieces for a contrary purpose.

Further, if one side of a piece of veneer that is broad enough for a whole face is bad and the other side good, the face had better be parted than put on a back whole, it being then in the same predicament as a joined face, that has one piece good and the other indifferent; in short, a blockmaker had better burn his very indifferent wood, than send it out, unless avowedly sent home as such, and as such ordered, as only fit for common purposes; otherwise sending a number of blocks of the above description, gives room

to

Of BLOCKMAKING.

to suppose he has not a sufficient quantity of good wood by him, or is too ignorant or negligent of his business, or else incapable of attending it so as to do justice to the orders he may receive.

He should likewise guard against being suspected of substituting inferior woods (needless to name here) for holly, pear-tree, or whatever else may be ordered, as the discredit will not be escapod, when, in the course of working, their inferior qualities are too evident to cover the deception.

The writer is aware that in some of the instances just mentioned, much must be left to journeymen, who, too often, are not very solicitous about their master's interest, or reputation. This however does not (with every person) acquit the master of his responsibility; he is applied to, and of course looked to for a proper performance of the orders.

It may therefore be observed, as a hint to Blockmakers, or their men, that among the causes of blocks not standing well, may be their taking part of a plank for a back that has a tendancy to warp one way, and a piece of veneer with a ten-

Of B LOCKMAKING.

dancy to warp the other, and glueing them together in such a state. The same may be observed of two cross backs ; and likewise of joined faces ; in which latter case, the consequence is, one part of the face rising from the back at the edges, and the other rising in the middle, that is, the middle of the joined piece, not the middle of the block.

Another cause is owing to planks, veneers, &c. lying in too hot, or too damp a situation, and are accordingly warped this or that way ; hence when made into blocks, and laid in a proper place, they cannot long remain true, but endeavour to recover their pristine state.

Another circumstance not always guarded against, and probably the cause of blocks casting various ways when at work, is the grain of the veneer running obliquely, sometimes the grain of the back, and sometimes both ; in either of these, or similar cases, it is evident the blocks will warp in different directions. A little care would prevent this, by cutting or squaring the pieces either for veneers or backs, directly with the grain ; and then, if they cast, it may be more expected it will be sideways or endways, (according to the construction of the block) rather

Of BLOCKMAKING.

ther than corner-ways, which every one knows is the most difficult to remedy. In short, it may safely be said, of prints and grounds that have never been able to do work properly from warping, that the cause has been owing to circumstances not properly attended to by the Block-maker, in the instances above-mentioned, or in others of which the writer is not competent to speak: However, what he has expatiated on, he here brings to a point which may serve as a kind of memento to every person who has to do with blocks.

If it be a joined block, see that the pieces are of equal quality as to the face, whether both good, or both indifferent.

If it be a whole face, see that it be nearly the same quality of each side.

See that the grain does not run obliquely, and the same of the back, if a single one.

Of cross-backs nothing can be said but of the outer one, and of that it may be seen whether or not it directly or obliquely answers to the face.

Of BLOCKMAKING.

Respecting the seasoning, few can judge of that at sight; the other circumstances of knotty, beahey, or other kinds of veneers, are what cannot always be avoided, as all blocks cannot be equally good, neither is it necessary, as very indifferent blocks will answer in some instances, where, to use good ones, would be folly and wastefulness.

Of the use and management of Blocks.

CROSS-backed blocks, if they must be used, are most proper for prints, but particularly for prints that have much work, and that have grounds to them not very easy to be hit in; and the firmer the backs are fixed to each other, the better; in order to render them as little liable to warp as possible; for the evenness of the face of the print being of the utmost consequence to preserve, no consideration should be spared to attain so desireable an object. The grounds however should be on single back blocks, that they may occasionally be made round or hollow, to suit the contracting or spreading of the face of the print. An objection notwithstanding lies here in the case of prints that have the work close and solid; as they cannot be taken off too wide, on account of the quantity of colour which they carry, causing the cloth, if soft, to dilate so much, that the grounds are generally too nar-

row

Of the use and management of BLOCKS.

row, although the print is brought hollow perhaps in order to work it. In these instances, probably single backed blocks may be best, it being difficult, if not impossible sometimes, to force cross-backed blocks round; and to swell them by soaking, lays a foundation for their being always out of order; indeed if the blocks for the grounds could be taken off proportionably hollow, and very dry, and made true, or rather round when they went to work, it might answer the same purpose. This inconvenience however does not happen when the cloth is permitted to get very dry, as then the quantity of colour causes it to contract; but in this case, if too much contracted, the laying of it some time in a rather damp place, will cause it to give out again.

This object of rendering prints and grounds fit for each other, and the keeping of them in that state, is, in the process of printing, of the first consequence, and (as before intimated) cannot be too much attended; as the immediate and certain effect of their not agreeing, or of the prints getting out of order, is the delay of the work; and the endeavouring to remedy it, by putting the face on another back, rarely answers the purpose

Of the use and management of BLOCKS.

purpose, especially if it gets into an unskilful printer's hands. For, among other circumstances, a great number of screws are usually put in, which, beside twisting the wood of themselves, the printer is continually tightening or loosening some of them, or forcing in wedges of some kind, soaking one end, then the other, and so on, till at last, the print is rendered entirely useless, and the pattern is stopped from going on; with, perhaps, only a piece or two printed; and as it may be too late to cut it over again, the misfortune is aggravated, as the expectation of gain from the working of it is at an end.

The firmer croſſed backs can be united without screws (for screws frequently force up the faces) there will be the greater probability of their standing; and if, for the conveniency of having span holes, a back is let in, the screws should stand quite acroſſ, or in squares; and it should by no means be ſo tight as to affect the print endways; therefore it ſeems more proper to let the grain of the back which is let in, be the ſame way as that of the upper back, whether it be thinner or thicker than that next to the veneer; for it may be reasonably ſuppoſed, that, if the upper back is nearly cut through in the

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middle, to let in a small one, it will lose much of its power to resist the warping of the back which joins to the veneer ; and much less of its power will be lost if the upper back be cut quite across, as well as quite through to the other back ; for from that circumstance, together with forcing the moveable back tight, the probability of the print casting endways, is aggravated to a certainty.

Another reason for endeavouring to fix prints to an uniform state is, that when single backed prints get very round, dove tails are generally let in very tightly, in order to check that tendency ; the consequence of which is, that the back rarely fails of being split, especially if not eased at proper times, or otherwise carefully attended to.

But after all, from the circumstance of not being able to know at first, whether crossed backs are of equal qualities, or as they should be in other respects, sound single oak backs seem preferable for general use, as not laying under the disadvantage attending crossed backs ; which is the great difficulty, if not impossibility, to warp them as you wish ; or if once warped, to get them true again at pleasure.

To

Of the use and management of BLOCKS.

To keep some particular prints true by force, if force be necessary, a strait piece of iron, rather thin, and of a breadth answerable to the thickness of the block, might be firmly bound round as a fillet, and answer that purpose; especially if, to such a check, two pieces are annexed to the sides into which the back is slid.

The crooked backs of blocks, perhaps should be either all of deal, or all of oak, because if one back is of oak, and the oak back is next to the veneer, that circumstance tends to throw the print hollow endways; neither the veneer nor the deal having strength sufficient to resist the casting of the oak; for it may here be observed, and proper use may be made of the remark, that though oak is harder than deal, yet deal has an advantage over oak, in not imbibing water so readily, and of course, not being so likely to cast by damping or wetting; but then, as a counter-balance, heat will sooner affect it.

It may likewise be here observed, of those trees growing where the sun does not affect them all round, that one side of them is softer than the other, the same as wood is softer or harder the nearer or farther it is from what carpenters call the sap; to which cause, among many others, oftentimes not to be accounted for, is the aptitude of some blocks to warp this or that way, in spite of every endeavour to bring them to the state

Of the use and management of BLOCKS.

desired, or to keep them in that state; from which consideration, when it is evident which way blocks are naturally inclined to be, and they have remained in a proper place long in that state, whether round or hollow, or whether that tendency is in the backs, or faces, they had better be brought to the state you desire, by plaining, rather than by heat or wetting them; else the consequence would be, their getting into their former state, as soon as left at liberty. But if their tendency to warp any particular way is exhausted, a second plaining cannot be properly recommended.

Blocks should be kept in a rather dry place, without a fire, at a convenient distance from the ground: those intended for prints seem to require laying with their faces downwards, and those for grounds with their faces upwards, prints in general requiring rather a round state than otherwise, and grounds the contrary. And for convenience the different sorts should be kept together, but, if convenience only is considered, the best situation for blocks to be placed, is on their sides, in proper ranges on shelves one above another, so that one can be drawn out without displacing the rest, which is ever the case when they stand piled one above the other.

Of taking off Blocks for Grounds.

HAVING mentioned the inconveniences attending grounds not fitting, owing to the difficulty of taking off some prints round enough; the following expedient, or something like it, may be found to answer the purpose, without being obliged to swell the prints, or contract the blocks intended for the grounds :

Let a piece of silk, satin, parchment, leather, or whatever you approve of as so much ductile and elastic, that after being stretched it may be contracted again, of about eleven or twelve inches in width, be fastened at one end to two pieces of wood, see fig. 95, each fourteen or fifteen inches long ; and at the other end let two other frames be fixed to run parallel with the silk or whatever else it may be : at the other end let there be nuts to receive two screws which are in the frame, and which being taken hold of by them, you can stretch or widen the impression which is to be laid on the silk, or other matter, to the degree required ; which when done,

Of taking off BLOCKS.

done, lay the block on it, hitting it on the back as usual, to receive the colour from the impression; thus, you are likely to have your purpose answered, without warping either the print, or the blocks intended for the grounds.

In taking off prints for the grounds in general, the purpose is best answered by having a piece of thin silk stretched and tightly fastened to a frame, sufficiently broad and long, to receive the largest prints; as this method has much the advantage over paper, in its laying even, and the colour not sinking into it after being used a few times.

In laying down the block to receive the impression, put the edge very nearly as close as you can, to the impression of the head and side print-pitches; and if it be a ground that is to pitch to another ground, observe a similar precaution; as no work in the grounds can come out beyond those pitches; for by doing thus you save the trouble of sawing off two sides, and sometimes save likewise a portion of block that may be of use.

In

Of taking off BLOCKS.

In order to get impressions clear and black, unless (as is the case sometimes) a black or dark impression is not wanted, rub the faces with a sponge just wetted with sumach or gall liquor.

In taking blocks off with the silk, they want but two or three smart strokes, and sometimes none, to get off the impression; but whether taken off from paper or silk, the blows should be smart and sharp, or the impression will be either faint or coarse.

When a person has not the conveniency of a table, tub, and sieve, some treacle and lamp-black may be mixed, and diffused with a pad made of smooth soft leather, stuffed with wool, over the face of the print; then (as this composition will not soon dry) lay a stiff piece of paper on the face, pressing it sufficiently all over, in order to receive the impression on it; which when done, take it off without rumpling it; lay it on the face of the block, and gently rub or press the back till the colour, or at least part of it, be transferred to the block. This however cannot conveniently be done if the work is in detached places, or if it be a large or loose flowing trail.

If

Of taking off BLOCKS.

If you take off with paper, endeavour to have your paper smooth and pretty stiff; for if soft, the colour will be imbibed by it, and of course less will be transferred to the block; foolscap run through the calendar is perhaps as well as any; as that process renders the surface glossy, and the colour lays longer on it.

General Rules to be observed at a Shop.

1. WHEN a print comes home, if not pinned or bradded, or trimmed out doors, the first object is to get it bradded and pinned (if there are to be any pins in it*) and so much trimmed, that an impression may be had of four joinings; then make what alterations and amendments that may be needful, which being done, get it iron liquored § and backed, or span-holes cut; then

* If the pinning be not of such consequence as to affect the block, or that the grounds are not affected by it, the pinning can be performed in most cases while the grounds are cutting, and thus some time may be saved.

§ It is certainly necessary to let the face of a print, or a ground that has fine-work, imbibe the iron liquor, especially if the wood be soft, for reasons

General Rules to be observed.

then get it in order, as well as your blocks, for taking it off for the grounds, and when they come out of the cutter's hands, just sight them to the pitches, but no more, for fear of their wanting some addition ; and try each ground to a separate impression of the print 4 times joined, to see if they all answer in respect to the pitches, joining, and fitting ; which when adjusted, put all the grounds to one impression of the print four times joined, which when likewise adjusted, make your last trial on a piece of cloth, which should be kept for such purposes ; then get them numbered, the grounds marked what colour they work in, and painted between the work where handtooled, and round the sides, to prevent the water much affecting them, (as intimated in the note) then give notice they are ready for working, and keep them in a proper place till wanted ; which you should always know a day or two before-hand, otherwise the print may go to work in a very improper state, in being either too round or too hollow

reasons well known : and to prevent the backs of prints or grounds from imbibing water, the effect of which is well known, it is as necessary to paint them where the veneer is hand - tooled away, and likewise the sides and ends.

General Rules to be observed.

hollow.---See the article setting prints and grounds to work.

Note, If it be a rule to have prints and grounds trimmed and bradded out doors (which, under certain circumstances is most convenient, as at some shops there are too few people to do such things, or they may be busy on other matters) directions should be given in what manner they are to be bradded, and particularly how much trimmed, for fear the joinings or other parts of the work be imperfect, and of course you may find it needful to make some additions.

2. As it frequently happens in prints and grounds, where the work is loose, or wide apart, that the pitches stand detatched from the work, care should be taken that a sufficiency of veneer be left about the pitch to admit of two or three brads, otherwise the brads, especially if carelessly put in, are apt to split the veneer, and the pitch pin is consequently injured, or perhaps entirely removed; which at all times is troublesome to replace in a proper manner.

3. As

General Rules to be observed.

3. As it is probable that notwithstanding the care which may have been taken to render the prints and grounds perfect in every particular, something may be faulty, it is necessary (and an injunction should accordingly be given) that every printer when he has to begin a new print, or even a ground, should send for the drawer or some proper person to look at it before he proceeds.

This leads the Writer to observe that a drawer or putter-on ought frequently to go round the Printing Shop, there being continually, from some oversight of his own, the negligence of others, or from accidents that will unavoidably happen, something to alter, remove or rectify.

4. A Print or ground should never be sent to the print room, or any other place to be put by till wanted, without knowing of the proper person whether or not it is done with, and with cutters (as mentioned before) the first object should

General Rules to be observed.

Should be to brad and just so much trim it that the pitches should be seen, and then give it to the drawer, or if it be the carpenters province to brad and trim it, it should be sent to him, and when he has done, he has to deliver it to the proper person.

N.B. A first impression of every print, and the last joined one, with the grounds, should be carefully preserved ; and where there are young apprentices, good employment may be made for them, by always having impressions of prints, and some particular grounds, on clear paper, in order to vary the colouring of the pattern as much as possible, it not being so laborious as inventing patterns, and yet partaking of the nature of it, as it is inventing new grounds for them.

*Of preparing and setting
Prints and Grounds to work,*

Or, in other Words, ,

*Making the last Trial of the joinings and
fitting of Prints and Grounds.*

IF there be pin work, examine carefully whether it be all in * and properly set, then see how the pitches answer by joining the print by the squares, and that none of them are obscured by the joinings, and see likewise, that the impression has an even face.

2. If the reds are separate, that is to say, if there be a brown red boundage for flowers, or other objects, pitch the brown red next, to see whether

* This is a circumstance very apt to be more or less omitted, and much sometimes depend on it, both in pencilling and grounding, therefore whoever is making this trial, should always have the pattern by him, to compare with the impressions.

Preparing and Jetting of prints and grounds to work.

whether the stalks want lengthening, shortening or trimming ; and if any other colour works with the stalk, it should be struck in at the same time, and amended or altered where necessary ; then, if there be two purples, besides the black, strike in the deep one, and then the pale one ; and, if there be three reds, observe the same process with them.

3. If there be grass grounds, see that none of the table-work obscure the pitches, even making an allowance for imperfect joinings ; or in other words strike in whatever grounds there are, in the same progression that the printer will print them.

4. If there be three purples and three reds, see that the different shades stand distinct from from each other ; and if there be piping, see that it joins or touches the wood where intended, or that it stand at a proper distance. Paper being deceiving, it is best, (as said before) to keep a spare piece of cloth for such trials, or at least for the last one, when it is supposed the prints and grounds are all fit for working.

5. In

Preparing and setting prints and grounds to work.

5. In order (as likewise intimated before) to render the work as neat as possible, let the pitch-pins, or the tops of them, be as small as possible, so that they can but be seen plainly enough to prevent confusion or mistake.

6. As it is in general deemed best to work the pieces as given out, first entirely through with the print alone, and then with the grounds in due succession ; therefore, while the print is working, there is time to get the grounds in order against they are wanted ;* and a print should be carefully looked at before it goes to work, to see that it is likely to have the grounds answer ; as for instance, if there be much solid work in the print, and the cloth be soft, it will be needful to work it as narrow as possible ; but if it be a light one, and has to work on hard cloth, such caution will not be necessary, neither will such caution be needful, if the print has been taken off for the grounds, by some such mode as is suggested a few leaves back, in order to extend whatever the impression is received on, before the blocks for the grounds were laid on it.

F

Note,

* That is, as required to be either true, round or hollow.

Of preparing and setting prints and grounds to work.

Note, It may be here observed, that good printing depends a great deal on the manner in which cloth (as the phrase is) is got up* ; but particularly, how it is calendered ; and in the case of cloth having to be grounded after it comes off the grans, too much attention cannot be bestowed on the means to render the performance easy and expeditious ; in attaining which, the grand object is to get the cloth as near as possible to the state in which it was printed on the table ; to which state the nearer it can be brought, it need not be said that the execution of

* If cloth is calendered too wet, stove drying will take the calendering out ; and if one edge is wetter than the other, then after stove-drying one edge must run slack than the other, or if the calender itself is imperfect, and the cloth naturally flimsy, Printers will accordingly complain ; but, such inconvenience may be partly removed, by running the pieces through a liquid of a stiffening quality.

The writer here mentions an error some Printers fall into of always looking at the back side of a piece for the colour : in some cases it is absolutely necessary, but in general it is wrong, to let it go quite through, and in some cases very much so.

Of preparing and setting prints and grounds to work.

of the after-grounding must be proportionably accurate and easy. But,

As the common methods of stretching and rolling are far from being adequate, except perhaps, for very small grounds, a suggestion or two may furnish means for improvement.

First, as the piece comes through the calender, which should be in as square a direction as possible,* or from over the rolls, if it be stowed, let it be received on a thin deal board turning on a horizontal spindle, see fig. 96, and at the corners and middle, let points be fixed, standing rather less than half an inch out, as fig. 97, to take hold of the cloth as you lap or fold the board; and at every fold where the point comes through, make a small mark with some colour that will remain distinct from the colour with which the cloth is printed; this done, the Printer may print from it, as it is unfolded, either by hand, or turning it on pivots at the end of his table; and when it has gone through the usual processes

* In any case, much indeed depends on good calendering, both for the ease and convenience of the printer, and the delivery or receiving of the colour, particularly where most requisite, that it sink not far into the cloth.

Preparing and setting prints and grounds to work.

of copper-work and fielding, let it, preparatory to its being grounded, be received on the same board (perhaps it may be needful to stretch it first,) taking care that the points fall on the cloth where the marks were made before ; it being evident, that if they go through where they did before, for which the marks are a guide, and the grounds are laid in as the cloth is unfolded, they cannot be a great way out of their places, even if larger grounds are made use of than in common. In some cases, if the cloth be received on a board without points, and a mark made at every fold, it may be grounded easier than in common, by taking care that the marks answer to every fold again in the same manner.

Or something similar may be done by receiving the cloth on a roller, with marks at a proper distances, and when it comes from the press, rolled in the same manner.

The piece might likewise be easily grounded, if stretched on a frame to keep the impressions square, or such a thing may be used in printing with marks made at certain distances, and grounded from the same frame.

Of Printing.

PReparatory to what the writer has to observe, concerning the operation of printing, a word or two of general import cannot be unapplicable, and probably to some Printers not unacceptable.

In the first place, it is observed, that it is a very common saying among printers, and even held as a maxim by many, "that no person is fit to give directions to Printers, or occasionally point out any thing as faulty, or, in other words, to overlook that branch of the business, unless he is, or has been a Printer himself."

The Writer will not set about in a formal manner to oppose the maxim; because it seems to him, from what he has gathered by an attendance to that department, to be founded on a very restrictive principle, simply this, that printers in general, conclude or apprehend, a person who is not a Printer, does not lay the necessary stress upon their

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their being properly accommodated with every requisite, in respect to colour, sieves, state of their piece, &c. &c. &c. and therefore cannot see the inconvenience, which, in some instance or another they labour under, when such a person ventures to point to any part of their work as not being properly executed ; he will only say, that many who make that a maxim, don't consider, that a *mere* printer, is but a little more competent to that situation than a common fieldman ; for unless he has a general judgment of whatever has any relation to printing (and that includes some knowledge of the other branches under some systematical arrangement) he is not so proper to superintend as another, who possesses such a portion of judgment, although he never had a print in his hand ; as such a one is more able to guard against bad work (unless from the allowed incapacity of the workman) and more able to remedy it when it occurs. But with those requisites it is nevertheless an advantage to him who has to overlook Printers in being or having been a Printer.

In fact the writer apprehends, too many of those who hold that maxim, do not clearly know when every appendage is in proper condition, or
when

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when really so how to keep them in that state; hence they are soon at a loss in one instance or another, and when found fault with, quickly get more confused; and then, not knowing how to extricate themselves; lay the fault on any thing rather than their own inability or want of judgment; for unless their ideas go along with the methods pointed out to them how to remedy the fault, they are as much in the dark when left to themselves, as they were at first, if not much more embarrassed. The writer can however say, he has often seen the futility of such excuses, by a Printer of approved abilities, executing with apparent ease, under a similarity of circumstances, what another could not make work with fit to be seen.

Reverting immediately to the maxim above spoken of, the writer trusts, a Printer will however grant, if he has every accommodation he requires, that a person who is not a Printer may at least know when the work does not appear as it should, and may venture to say how it should be; and this leads to remark on another common phrase of Printers, when under certain circumstances some fault is found with their work respecting the joinings, which is "that they keep to the pins."

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Now, however strange it may seem to some Printers, the writer asserts that the pitch-pins are not his proper and infallible guides ; for every Printer finds at times, that through the twist of the cloth, the warping of his print, a mistake in pitching, and many other causes, the pins only serve as mere directions or guides, to whereabout he is to lay his print : in short, joining a print and joining the pitches are different things ; the same as pitching a ground by a pin or two, or by pitching the shape of it to the work of the print.

Therefore a Printer ought always to keep in his eye or his mind, how the print should join supposing he had no pins to pitch by, for what will become of his printing when he loses his joinings, if he has no other mode of determining him than the pins ? and even in joining by the pins, his sight should take in the whole top and side of the print, and he should consider and know how the work is to fall, otherwise he cannot work to a certainty in respect to the joinings, or getting into them, when by any cause whatever he is thrown out.

It must be observed however, that in this, as well as in every other rule, for any operation whatever,

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whatever, it is impossible to provide for every circumstance, so in this case it is allowed that some prints, from the nature of their construction, such as very promiscuous or irregularly shaped ones, seem to have nothing to direct the Printer but the pins; but even in this case, exclusive of the pitch pins, there is an attention due to keeping the face at the joinings as even, or as much alike the rest of the impression as possible, which will not be the case if the work be too close, or slack at the joinings.

Further, it may be advanced that in these instances, lightly as some printers may think of Grounders, they may be looked to as examples for their imitation, as they rarely regard pins, so much as the shape of the work, especially in grass grounds; and that implies a necessity of studying (if it may be so said) what the nature of the pattern is; for even when pins may answer, they generally have their grounds sighted all round; not looking just at this or that corner, but (as every printer ought) they employ their sight and attention on the whole length of the ends and sides.

After saying thus much, which the Writer begs every journeyman printer not to take as arrogantly advanced, but only as suggestions for him,

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him to consider of, and turn to his own advantage, he proceeds to speak immediately to the operative part.

When a Printer takes a new print in hand,* his first care is to try on paper, or a trial piece, that it is in the square, the pitches firm in their places, that the print does not want mending, and that it is neither too round nor too narrow ; likewise that his apparatus is in proper order ; or if he cannot have it so, he should intimate to the proper person in what particulars it is not so ; and the order in which his apparatus ought to be

• As well as the above considerations, a Printer may reflect that the expence incurred by cutting the print he takes in hand, with the additional one of his working it, must be reimbursed before any profit can accrue to his employer : therefore, as all that depends on his management, he is in a more momentous situation than many think : as all the expence incurred, and the profit reasonably expected, will be lost if through his incapacity or inattention, he spoils what he is entrusted to execute, or suffers his prints or grounds to get any way so out of order, that little, if any, use can be made of them, by himself or any other person.

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be, no Printer should need to be informed, is, that his blanket is not too nappy nor too hard, too thick nor too thin, his sieve too fine nor too coarse, and that his piece is properly calendered or stowed. *

These matters adjusted, the tearing is the next object, and not the least important ; for good printing cannot be performed without good tearing ; and good tearing can only be such, when a proper and equal quantity of colour is disposed over the sieve.

In

* Some may expect perhaps that it be specified here in what instances these matters are to be attended to. The writer certainly attempted it, but found from various causes, such as the customs of a particular shop, the caprice of an overseer, different courses of work at different shops, &c. he could not do it to his satisfaction : it may however be here said, that some person should be informed of what the design of every pattern should be, for much, respecting sieves, colour, strength or slightness of the impression, &c. depends on that circumstance : Indeed (as before observed) the putter-on need in most cases consult a proper person in the Printing-shop.

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In the circumstance of trying the joinings, a Printer may be deceived sometimes, though the pitches of the print all seem to answer, and the pitch pins of a ground answer to the pins or holes in the print; for both these cases may occur, and yet the print not join, nor the grounds fit* (as intimated a little before,) hence if his judgment be not sufficient to discover the design of the pattern, in respect to the trail, or the disposition of set objects, or in what manner the grounds should fall, he should consult those who may be supposed to know. He should likewise, for the convenience of those who have to ground after him, see that the pitches be clear, though they should be but barely so (as observed in the article respecting pitches) and that he keeps his

* This may be illustrated by supposing that the putter-on may have mistaken his square, and put the pitch-pins at the head further out, or nearer in, than they should be; and the same at the side: in this case the Printer, in trying the joinings, will join by the pitches, though the work may be nearer or closer in the joining than it ought to be.

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his joinings, and his edges particularly even, which but for the sake of the grounding he might not be so careful of.

As a Printer is answerable in a degree for his print or grounds keeping in order while he is working them, he should carefully observe their tendency to get round or hollow, and should frequently examine whether any parts are broken or worn more than the rest; in either of which cases, he should give proper notice: for if a print gets very round in the course of working a few pieces, it must stand to reason the grounds can only fit a part of them, unless they should chance to follow the tendency of the print, or can be easily warped to such a state; but, as there can be no certainty of that, the work should be stopped, and the print gently brought to a proper state; for every Printer must know, that when (through causes, obvious enough) he continues working a print till it is so much twisted, that he cannot possibly proceed; violent methods are made use of, and the print rarely afterwards is capable of doing tolerable work.

A Printer, besides being attentive to those particulars immediately under his own eye, is accountable

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countable for the ignorance or neglect of his tearer, for as a careless tearer may very soon do irremediable mischief to a print, in washing and drying it, and likewise, by not properly cleaning sieves, and brushes, may do the work much injury ; a Printer, if he is not every whit as careless, will see in what manner they are done : indeed it would be well, from the many accidents that happen from prints, and other matters being left to the care of tearers, who are in general ignorant boys or girls, that it had been an established custom for the Printer himself to do, at least, part of these offices.

Besides the aboye hints immediately addressed to the Printer, as what he should always have in his view, the greatest part, if not all, that has been observed, and may be farther spoken of, respecting cloth, colour, blocks, and prints and grounds, should come under a Printers consideration* ; for unless he can account, in some

* See the note, respecting the needfulness of a Printer's referring to the rules for putting - on, cutting, &c. at the conclusion of this section on printing. It may however be here said respecting blocks, if a Printer be acquainted with their nature,

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some measure, for the inconveniences or mistakes that may happen in the course of using those articles, he cannot be supposed to know how to prevent ill-accidents, or how to remedy them when they do happen through any cause whatever.

¶¶¶ As nothing that is faulty is too trivial to guard against, or to animadvert on,* the writer will close this article on printing with mentioning two or three instances of inattention in that department.

The Writer once observing, that about one of the corners of every print that was laid, the impression was heaviest; in pointing it out he could

he can the better know how to manage them; and if he be acquainted with cutting, he knows a sound piece of work from an unsound one, and will, (or at least ought so to do) use it accordingly.

* This may serve as an apology for the insertion of those observations, which may probably to some persons, seem of too little consequence to be remarked on.

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could get no other reply but that the print worked fuller there than any other part ; this, however, from the appearance of the face, he would not grant, the Printer still insisting it was so, 'till at last, looking obliquely on the sieve, as the tearer worked, he saw a ridge of colour left nearly in one place, after the last stroke, which the tearer could not rectify ; at length, looking at the brush, it was plain that one part, by some means, had been burnt so considerably, that the hairs were so shortened and thinned, that that part hardly touched the sieve ; and from her method of holding it, a ridge of colour was always left, that caused the effect above mentioned : now here was a triple instance of inattention ; in the first place, the tearer had carelessly suffered the brush to be burnt in drying it, (as she afterwards owned, and probably fear of being reprimanded, induced her to keep it secret) in the next place she did not perceive the effect it had on the sieve ; and lastly the Printer, if he perceived the effect on the table, did not, as he should have done, see that his apparatus (which included the tearing brush) was, or was not in proper order.

Another time the writer seeing the head of the impression in general fuller than the rest, he of course mentioned it ; but here the fault could not be discovered.

Of PRINTING.

covered to be in the tearing, nor did it appear to be in the face of the print, and the Printer was sure it was not his fault ; for he dipped and turned his print, and then dipped again (the print requiring much colour) but at last, he was convinced it was from his knocking it, and yet perhaps he not to blame ; for in the middle of the back that was let in, there was a very hard knot, and the other part toward the head remarkably soft ; so that by insensible degrees the knot had at length, by its resistance to the blow of the maul, caused it to slide as it were into the soft part, where it had evidently made a cavity ; and the Printer as insensibly giving into that direction of the maul, at length, instead of hitting the back in the middle, hit it nearer the head, which made the impression heaviest in that part.

Another having a sprig print to work, either mistaking the pitch end, or chusing that for the pitch that seemed most commodious for him (for the pitches were pins pitching to pins) he finished what was allotted him to do in that manner, and the mistake was not seen till the work was to be grounded ; the consequence was, that the person who had to ground it, was obliged either to begin at the other end of the piece, or to have a set of awkward pitches put in to answer the work

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the way it was printed ; either way however was awkward, the side-pitches being off the edge, and particularly so, (from circumstances which cannot be well described) for the grass grounds which likewise belonged to it. In this instance the Printer was in fault, in not concerning himself about how the grounds were to fall ; or in fact it seemed as if he did not note whether any grounds belonged to it, much less to take care, as every Printer should, that they were all clear, and distinct from each other, as before repeatedly intimated.

Another circumstance was observed, in a Printer working a pattern of sprigs, that stood 6 or 7 inches apart, by making it a point to work the near sprigs close to the near edge ; by this it happened that the off-edge divided a sprig, so that but half of it was on the sprig ; now the inconvenience here that escaped the Printer's notice or consideration, was, that in making up a garment, either half a sprig must frequently appear, or two or three inches of the cloth must be cut to waste ; and the pencilling, of course, thrown away, but in this circumstance to prevent or remedy that inconvenience, the Printer had only to work the near sprig an inch or two further in the piece, which from the great distance of the sprigs from each other was of little consequence ; and then

Of PRINTING.

the sprig that was half off of the off-edge, would have been entirely so.

Thus the garment could not be made up without either imperfect sprigs, or without cutting to waste; now in this case it may be observed, there wanted an attention to the remotest circumstance, that of the wear, or at least, the making up of the garment; and this includes a query, which might with propriety have been put to that Printer, which is, If he had been printing that piece as a present for a favourite female, whether he would not have bestowed a little more consideration on the particular alluded to.

Other instances to the above purpose could be adduced; it is, however, trusted, by exhibiting these few, that every Printer understands he is requested to consider himself under a necessity of attending to many more circumstances than at the first glance may seem necessary, or even as apparently bearing no relation to his allotted department.

And in proof of what the writer has advanced on the necessity of Printers (as well as others) looking to other departments than their own,

if

Of PRINTING.

if a Printer refer to Rules 1, 3, 8, 11, 14, 12, 13, 28, for putting-on; Rule 7, for cutting; and Rule 3, for pitches; as well as some others, that need not be particularized, he will find articles enough to observe.

From looking back to Rule 8, respecting the keeping of sprigs whole, it seems proper to observe, that a Printer should take care if they drop or rise in the joining, that he carry one direction through the piece, because if they go one way only half over the table, and half the other, the consequence will be, that the disposition of the sprigs (unless they are all alike and are to stand one way) will appear as fig. 97; for instance, suppose six sprigs stand in the print as fig. 98, of course they must rise or drop a third to make the joining; now if the pattern be composed of two sorts of sprigs, standing thus, fig. 99 and 100, one sort should run across the piece; but if the dropping or rising is checked in the middle, (because the Printer finds a little inconvenience in the joining, from such a circumstance) they will appear thus in the middle of the piece, or in some other part, fig. 101, that is, three sprigs of the same sort will be together. This may be probably over-looked in printing, but when the whole piece is seen extended over a roll, it will soon catch the sight.

Of Pencilling.

THE Writer thinks little if any thing can be said of this operation, it being simply filling a line with colour, except in cases where pencillers have to form shades or shapes; of this it may be observed, and something more may be said in another place, that some attempts to be sure have lately been made, to make something like Drawers of them, by giving them only lines of pins, or others marks, as fig: 102, as a guide; but how accurately they adhere to such directions, or form a shape as it ought to be, every observer must form a decision.

In foreign patterns, it is known a deal of work is done by the pencil, but why not practicable here, the writer will not (at present) say any thing further than, that there seems to him to be a line, beyond which, in this case, as well

Of PENCILLING.

well as in others, it is absurd to attempt going beyond ;—the best Penciller (such as we have in this country) can go but a little way in making shapes of any kind, without some boundary ; of course (as above observed) respecting their pencilling to a line of pins, as well as their making shades in flowers, or other objects, it seldom does much credit to the designer, in the imitation of his design, which they so roughly and inaccurately make on the cloth, especially when the colour is of a deep hue ; in other cases where a mere stain is perhaps only wanted, they may execute what the writer otherwise explodes, as here the pins, or whatever else it may be which they pencil to, catches the sight and takes off the attention from the inaccuracy or bad shape of the pencilling.

See something respecting pencilling Rule 16 and 35 for putting on.

Of Engraving.

WHAT has been before said of the putter-on, and the Cutter well considering how to attain the effect that is desired, should likewise be attended to by the Engraver; for before the pattern is begun, all impediments towards producing the desired effect, should be removed; hence the Engraver himself should start all the objections that he can discover towards that end, and if reasonable, they will reflect credit on his probity and judgment, as otherwise he might to be sure engrave it, and engrave it well; and yet the plate may not be able to do work properly in every respect; but, (as before observed) if all impediments are provided against, no one need be told there is the greater certainty of the success of the operation; besides, if mistakes happen (and happen they will to the most careful) they will be excuseable in proportion to the pains taken to prevent them;

therefore

Of ENGRAVING.

therefore, that Engraver has the greatest merit, who can best engage for the effect his engraving will have on the cloth through its whole process, and can accordingly manage his work for that purpose, as well as being merely able to cut a clear stroke, or being an expeditious workman; and particularly, his value is enhanced if he be well acquainted with the mechanism of the copper-plate press, and the operation of working it; in short, whatever may be said of an Engraver's good sight, steady hand, neat touches, clean strokes, and so on, it is the appearance which his work has on the cloth when finished (unless ill-managed at the press) that marks his judgment, and makes his labour valuable.

It may be observed, that as every Engraver has his peculiar modes of operation (similar to what has been said of Cutters and Pinners) therefore suggestions towards directing them must in many cases be unnecessary; though here an Engraver is not circumstanced as a Cutter, a Pinner, or Printer, engraving being an operation that stands alone, excepting its being so far connected with block-printing, that the Engraver by making his observations on it, may see wherein he can imitate

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Of ENGRAVING.

or excell it in any shape, and if he will look carefully over the Rules for putting on the block, and even for cutting, he will find many of them which may be made useful to himself. For instance, Rule 2 points to the necessity of well considering how to transfer the effect of the pattern from the paper to the cloth ; Rule 4 points to the consideration of what are the most striking features of a pattern. Rule 6 directs the attention to the preservation of an even face ; Rule 10 is often necessary to attend to ; and Rule 17 particularly so, if he has any thing to do with dark ground plates. Rule 23 may probably be useful in respect to two or three colour plate-work. Rule 24 may be made useful in an inverted manner, that is, by taking care to keep stalks, or whatever else is to join, rather too short than too long ; as it is easier to lengthen when they may be rather too short, than to shorten when they are too long. In some cases where the stalks have to join to dark objects, the Rule may be of use as it literally stands. In short, as one principle inculcated through this work, is, that expanded observation will form the basis of judgment ; the end of which is to attain certain points ; an Engraver, by keeping that principle

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in his view, may be able to educe some advantage from articles apparently very remote from his immediate department, and a stress is the rather laid on it here, because it is sometimes said, a person may be a good Engraver without being able to draw well ; but, not to draw well, in its general acceptation, includes a great deal, and perhaps more than is absolutely needful for an engraver to Callico - Printing to know, it is however, insisted on, that unless an Engraver or Copper puncher* study in what effect consists, as taking in taste, spirit, expression, &c. he cannot tell how to ensure it, much less produce it, if left to himself, or if his copy or pattern be not well managed: it may be true, there have appeared instances of good Engravers producing good effect, and yet not able to draw ; but to this it may be said, they must have had naturally the principles within them of drawing, though they have never operatively evinced it; and had such persons applied themselves to drawing instead of engraving, it is probable they would have shewn it; but however, this for certain will be granted, that an Engraver can hardly be the worse for being able to draw, and therefore to contend about the necessity or utility of it to an Engraver, or that a man

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* For this operation there is no fixed term, therefore if the above be an awkward one, it is begged to be excused, as the writer cannot find a better.

Of ENGRAVING.

can be a good Engraver without it, is frivolous and a mere attempt to put the best face upon what the defenders of such a position are conscious must be a deficiency, whether originating from supineness, untoward circumstances, or that kind of obstinacy which hinders a person from calling forth or improving those faculties with which he may be naturally endowed.

Immediately respecting the following rules, the writer intimates, that he purposely omits saying much of real engraving (treatises enough being published concerning it) as what he chiefly advert's to can hardly be called engraving; yet even in the present mechanical mode of process, it seems very often necessary to adhere to the principle of engraving as adopted for Calico-Printing*, that is, in keeping three shades in view, for in the smallest modern patterns that are chiefly performed by punching, the keeping of those three shades must be attended to*, as in

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* In the History of Calico Printing at the close of this work, see what is said on the introduction of Engraving into the business, its progress, and the innovations it has undergone till this time.

* Strictly speaking, the white cannot be a shade, but propriety must give way to arbitrary terms.—It

Of ENGRAVING.

the first instance a light must be ensured, then a shade (which is best executed by diagonal lines) and then a solid; now in well proportioning these three articles, which constitutes, in general, the good appearance of this kind of patterns, it is necessary to be very careful (as observed above) that the white object, or whatever it is that is to appear white, rises up or stands forward as it were, as in general that it is which gives a spirit to the whole; then to observe that the strokes forming what may be called a shade, be not so open as to cause a coarse appearance on the cloth, or so close as that the impression of them will form a mass: And lastly, That the solid part be just sufficient to give (according to the nature of the pattern) a proper weight, or finish to the whole.

It is here said too, that this circumstance must be attended to in the first instance;—that is, in the drawing of the pattern, hence this observation, and perhaps others, may seem more properly belonging to the designer, but it is rather inserted here to induce Engravers (as well as the Writer has endeavoured to induce Printers and Cutters) to look a little farther than to their immediate departments.

Rules, &c.

1. **D**IAGONAL strokes are always best for working, as they are the least likely to be injured by the action of the doctor: horizontal strokes are the worst, being soon torn up.

2. Shades should stand clear of each other, that the work appear not as a mass of colour, from the common circumstance of its spreading, which in general, is according to the texture of the cloth; hence borders for fine lawn, or other handkerchiefs, admit of neater engraving than for cloth in general.

3. Two many points should not come to a centre as fig. 103, as those the most horizontal would be worn out sooner than the rest; as likewise from the confluence of the shades, the colour will spread and appear in a body further from the centre than desired.

4. Instead

Rules, &c. for Engraving.

4. Instead of objects standing in dark grounds, as fig. 104, there should be something between them as fig. 105, to break the action of the doctor.

5. Great care should be taken as the work goes on, especially if it be a close pattern, that one part is not heavier than another, particularly if it be a small or close trail, to which nothing more contributes, than keeping the bevil of the graver alike*; the depth of the engraving should likewise be attended to, that in repairing a plate, if rubbing down is requisite, it does as little injury as possible.

6. In

* The proficient may probably smile at such directions, as if every Engraver ought not to be well acquainted with these circumstances: but the Writer all through the work, begs every one to carry in mind that it is not proficients he ventures to advise, though he frequently recommends matters to be retained by them in memory: in fact, the work itself is more as a remembrancer, than a guide or an instructor, and as a remembrancer it may be an assistant to all.-See the latter part of the Introduction.

Rules, &c. for Engraving.

6. In solid ground patterns, objects should not stand wide apart, as the ground by the action of the doctor will be gone sooner than objects, or more properly the work within them.

7. In respect to punches, the first circumstance to attend to is, whether the impressions they are to make, or parts of an impression, are to stand alone or to have fine, coarse or solid work that is done with the graver, join to them; for, excepting some cases, as perhaps where a strong outline may be required to a slight or faint filling, the impression made by the punch and the strength of the engraving should be proportioned, as in the instance of dark grounds; for in this case, if the outlines of the punch be sharp and fine, the impression that it will make in the copper will be much sooner worn out than the ground, the engraving for a dark ground being generally very strong and deep.

8. Punches should not be larger than fig. 106, it being very difficult to use large ones, so as to make an even impression with them, and they should

Rules, &c. for Engraving.

should be as little solid as possible :—If however, the object be too large to be done with one punch, two or more different punches to form the object had better be made.

9. Punches with coarse bodies or thick lines will cause the copper to rise about the edges, therefore in some instances the graver has double work to do, hence the punches should be so wrought as to form outlines, which are to be filled in with the graver.

10. There being always more or less trouble in the trial of every new plate, on account of the joinings, the fixing the plate to the slider, &c. it is recommended to the proprietor or worker of every press, the following expedient for the preventing of such an inconvenience, similar to what is offered for squaring blocks.

When you have a plate that exactly accords to that part of the roller as intended, whether a quarter plate, on a half quarter one, or both ; and it

Rules, &c. for Engraving.

It is likewise exactly cut on the sides for the purpose of being screwed or otherways fixed to the slider, let there be made at the four corners of the square of it, and in as many intermediate divisions as can be made convenient, fine holes drilled through it, as straight as possible; then, whenever another plate is to be made use of, that and the plate which has the drilled holes, are to be laid face to face, and with a fine needle prick through the drilled holes in the plate that lays uppermost to the plate that is beneath (taking great care that neither of the plates be removed) and at the same time, as carefully mark, according to the notches already cut in the sides of the uppermost plate, where they are to be cut in the other; thus will the square of every plate (intended to work at the same press) be alike, without the Engraver having the trouble (as is usually the case) of squaring every plate, to say nothing of the chance of a mistake; and thus likewise will every plate be adjusted to the press with as little inconvenience.

The writer is aware, notwithstanding what he has above suggested, that it may be necessary sometimes to twist or turn the plate out of its square direction, to render the work more accurate.

Rules, &c. for Engraving.

rate; hence it seems better to be adjusted to the press, after being engraved. And this brings to his recollection a case, where a stripe quarter-plate was obliged to be twisted near a quarter of an inch out of the usual situation; the square being in the direction as fig. 000 therefore the stripes could not join without that twist; but had that plate been squared from a standard plate, perfectly square and adjusted to the press, the circumstance would not have happened; and this is a proof (in the writer's opinion) of the needfulness of adopting some such mode.---- See the same expedient as before offered for squaring a block.

The Writer now concludes (at least for the present) his suggestions on Designing, Putting-on, Cutting, Printing, and Engraving, with again enforcing what he recommended at the beginning, and has several times repeated (though probably to some the repetition may be tiresome) that in every part of the operation, the successive stages, and the appearance of the work as for sale, should be kept in view; and that every drawer, cutter and printer, should consider the operation under his hands, so connected with, or dependant on each others respective branches, that unless attended to in that light, the last state cannot exhibit an appearance which is undoubtedly desired, or even an appearance that will do credit to any part of the operation; as an imperfection in one part only, must diminish the value of the whole; and is the more to be regretted (at least in the writer's opinion) if proceeding from the circumstance of one person having, somehow or other, got his work out of his hands, without being able or willing to consider what other operations it has to go through, or in what manner it may be affected by them; and therefore, as every one must allow it is better

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to prevent faults, than having to remove them, the writer has endeavoured to be as particular as possible in the subject of putting on the block; as the more attentively that operation is performed, in adapting it to the circumstances that are to follow, the after-processes are more likely to succeed.* As for exquisite neatness of drawing, (except in particular cases) the writer does not lay so much stress on it as many do; he himself seldom affected it;† it has its merits undoubtedly; but (as spoken of in the beginning of this work) it only has it, strictly speaking, when united

* See the introduction to putting on, shewing the necessity of an operation being accommodated with true and other conveniences.

† As to putting on the block, the Writer owns he never very much desired to have any thing to do with it, not from thinking it beneath him, but from a thorough conviction of the difficulties and other disagreeable circumstances attending it, together with the great probability that after the utmost care, the effect at last, from causes which cannot be always foreseen, would not be as intended.

Rules, &c.

united with more generally essential properties, and which in fact includes the consideration of almost every article which he has mentioned, as well as others which he may yet exhibit; and adverting to what he has so often recommended, and indeed but just alluded to, namely, the acquiring a general knowledge of the business, and in virtue of that knowledge looking to the ultimate effect, let it be remembered by every one, that indolence and inattention will frustrate the best formed precepts and clearest displayed rules; and that he who would acquire fame, or profit, must be vigilant; and if he be fortunate enough to have some track pointed out to him, he will look on all sides, as well as directly forward; and not only take advantage of every encouraging circumstance, but will even make obstructions and difficulties useful to him, by stimulating him to fresh and more vigorous exertions towards attaining the object in view, and of course reaping the credit and recompence due to such efforts and such perseverance.

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Rules, &c.

In fine, bringing to a point all the positions or principles which the writer has been endeavouring to inculcate, be it remembered, by every one, that

HE WHO WOULD EXCELL MUST EXERT HIMSELF.

HE WHO WOULD BE GENERALLY USEFUL, MUST ATTAIN A GENERAL KNOWLEDGE.

IN THE PERFORMANCE OF ANY WORK THE LAST STAGE SHOULD BE ALWAYS KEPT IN SIGHT.

IN EVERY OPERATION, SOME RULE SHOULD BE OBSERVED, BUT THE APPEARANCE OF IT SHOULD BE KEPT BACK.

And lastly

EXPEDITION IS THE LIFE AND SOUL OF BUSINESS ; BUT SLUGGISHNESS OR PRECIPITANCY ARE EQUALLY ITS SUBVERSION.

ADVERTISEMENT.

The next Part will contain the processes of copper and field-work, colour-making, account of drugs, chemical processes, &c. suggestions for a new mode of printing; an Essay on the mutual attention due from masters and men to each other.---History of Callico Printing, including biographical sketches of the most celebrated Printers, Designers, and others.---The state of country-work.---Remarks on the principal patterns lately exhibited, &c. and other matters not prudent yet to announce.

.¶ Several articles will be given with the next part, in order to be transferred to this, that have occurred since the printing of it.

§ *It is here intimated that a work, distinct from this, is under contemplation, respecting Callico-Printing, which, as it will probably be expensive, Proposals for publishing it, will be offered as soon as possible.*